2005 AMENDMENTS
to All
CTS Guides to Standards and Implementation

Section A

1. **Remove** page A.4 and **replace** with new page A.4 (Revised 2005).

2005 AMENDMENTS
to All
CTS Guides to Standards and Implementation

Section A

1.   **Remove** page A.4 and **replace** with new page A.4 (Revised 2005).

2005 CTS AMENDMENTS
to the
Career Transitions
Guide to Standards and Implementation

Summary of Curriculum Changes

Course withdrawal:
- CTR3020: Organizational Leadership

Section B

- **Remove** pages B.5–B.6 (Revised 2004) and **replace** with new pages B.5–B.6 (Revised 2005).

Section F

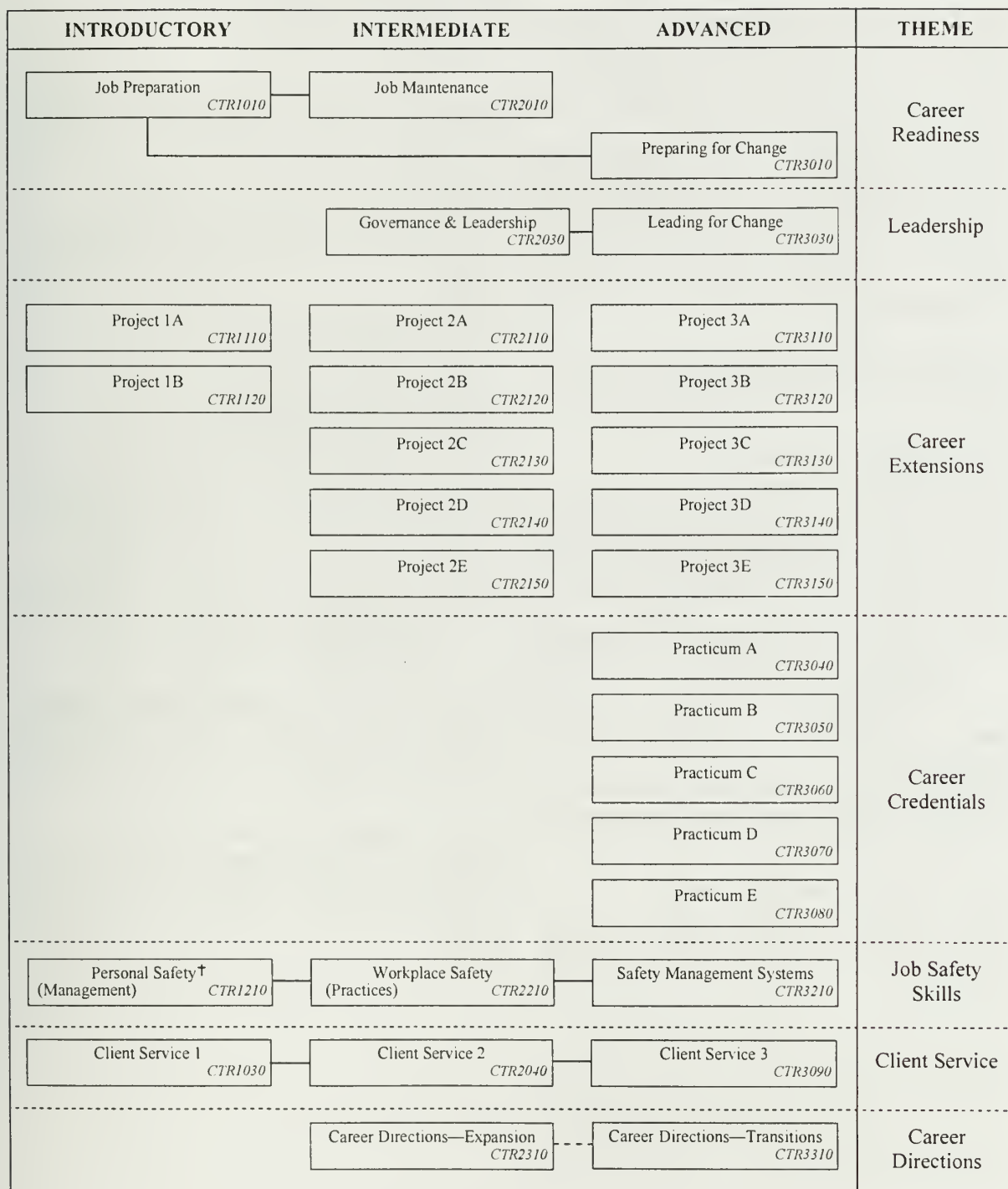- **Remove** pages F.1–F.2 (Revised 2000) and **replace** with new pages F.1–F.2 (Revised 2005).
- **Remove** page F.5 (Revised 2004) and pages F.6–F.8 (1997) and **replace** with new page F.5–F.8 (Revised 2005).

Section G

- **Remove** page G.3 (Revised 2003) and **replace** with new page G.3 (Revised 2005).
- **Remove** pages G.23–G.25 (Revised 2003) and **replace** with new page G.23–G.25 (Revised 2005).

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Job Preparation CTR1010	Job Maintenance CTR2010	Preparing for Change CTR3010	Career Readiness
	Governance & Leadership CTR2030	Leading for Change CTR3030	Leadership
Project 1A CTR1110	Project 2A CTR2110	Project 3A CTR3110	Career Extensions
Project 1B CTR1120	Project 2B CTR2120	Project 3B CTR3120	
	Project 2C CTR2130	Project 3C CTR3130	
	Project 2D CTR2140	Project 3D CTR3140	
	Project 2E CTR2150	Project 3E CTR3150	
		Practicum A CTR3040	Career Credentials
		Practicum B CTR3050	
		Practicum C CTR3060	
		Practicum D CTR3070	
		Practicum E CTR3080	
Personal Safety† (Management) CTR1210	Workplace Safety (Practices) CTR2210	Safety Management Systems CTR3210	Job Safety Skills
Client Service 1 CTR1030	Client Service 2 CTR2040	Client Service 3 CTR3090	Client Service
	Career Directions—Expansion CTR2310	Career Directions—Transitions CTR3310	Career Directions

——— Prerequisite   - - - - Recommended Sequence

† Course is also offered in Community Health.

COURSE DESCRIPTIONS

Course CTR1010: Job Preparation
Students develop successful employment search skills and a personal employment search portfolio.

Course CTR1030: Client Service 1
Students are introduced to the principles and practices of client service. The learning acquired through other CTS courses is extended and enhanced, and opportunities are provided for students to apply and to integrate, in real-life contexts, the knowledge, skills and attitudes developed through other courses.

The context of instruction for this course is determined by the other CTS strands to which it is linked.

Course CTR1110: Project 1A
Course CTR1120: Project 1B
Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant.

Note: The project courses may not be delivered as stand-alone courses, nor may they be combined with core courses.

Course CTR1210: Personal Safety (Management)
Students develop practical safety-related knowledge, skills and attitudes, and obtain training and possible certification in emergency first aid.

Course CTR2010: Job Maintenance
Students acquire knowledge about workplace requirements, rights and responsibilities and relate this knowledge to personal career/employment expectations.

Course CTR2030: Governance & Leadership
Students are introduced to governance, its place within the administrative structure of a school or community, including the roles, responsibilities, practices and procedures for participating in governance and leadership.

Course CTR2040: Client Service 2
Students expand on the principles and practices of client service previously developed. The learning acquired by students in CTR1030 Client Service 1 is extended and enhanced, and additional opportunities are provided for students to develop client service abilities by applying and integrating, in real-life contexts, the knowledge, skills and attitudes developed through other courses.

The context of instruction for this course is determined by the other CTS strands to which it is linked.

Course CTR2110: Project 2A
Course CTR2120: Project 2B
Course CTR2130: Project 2C
Course CTR2140: Project 2D
Course CTR2150: Project 2E
Students, through projects, extend and enhance competencies developed in the Career Transitions strand or other Career and Technology Studies strands to contexts that are personally relevant.

Note: The project courses may not be delivered as stand-alone courses, nor may they be combined with core courses.

Course CTR2210: Workplace Safety (Practices)
Students explore workplace safety principles and practices, and apply these principles and practices to a variety of contexts.

Course CTR3010: Preparing for Change
Students develop knowledge and skills relating to the changing labour market, and relate these changes to analyzing and refining personal career plans.

COURSE CURRICULUM AND ASSESSMENT STANDARDS:
SECTION F: ADVANCED LEVEL

The following pages define the curriculum and assessment standards for the advanced level of Career Transitions.

> Advanced level courses demand a higher level of expertise and help prepare students for entry into the workplace or a related post-secondary program.

TABLE OF CONTENTS

ASSESSING STUDENT ACHIEVEMENT IN CTS

The CTS assessment standards assess two basic forms of competency:

- What can a student *do*?
  - **make** a product (e.g., wood bowl, report, garment)
  - **demonstrate** a process
  - strand-related competencies (e.g., keyboarding, hair cutting, sewing techniques, lab procedures)
  - basic competencies (e.g., resource use, safety procedures, teamwork).

- What does a student *know*?
  - knowledge base needed to demonstrate a competency (link theory and practice).

CTS Defines *Summative* Assessment Standards

The assessment standards and tools defined for the CTS courses, referenced in Sections D, E and F of this Guide, focus on the final (or summative) assessment of student achievement.

Assessment throughout the learning period (formative assessment) will continue to evaluate how students are progressing. Teachers direct and respond to students' efforts to learn—setting and marking tasks and assignments, indicating where improvement is needed, sending out interim reports, congratulating excellence, etc.

Teachers will decide which instructional and assessment strategies to apply during the formative learning period. As formative and summative assessment are closely linked, some teachers may wish to modify the tools included in this section to use during the instructional process. Teachers may also develop their own summative assessment tools as long as the standards are consistent with the minimum expectations outlined by Alberta Learning.

Grading and Reporting Student Achievement

When a student can demonstrate ALL of the exit-level competencies defined for the course (course learner expectations), the teacher will designate the course as "successfully completed." The teacher will then use accepted grading practices to determine the percentage grade to be given for the course—a mark not less than 50%.

The time frame a teacher allows a student to develop the exit-level competency is a local decision. NOTE: The *Guide to Education: ECS to Grade 12* specifies that students must have access to 25 hours of instruction for each credit. Students may, however, attain the required competencies in less time and may proceed to other courses.

Teachers are encouraged to consult their colleagues to ensure grading practices are as consistent as possible. Further information about assessing and reporting student achievement in CTS is provided in the *CTS Manual for Administrators, Counsellors & Teachers* (Assessing Student Achievement).

Components of Assessment Standards in CTS

The following components are included in each course:

- **general outcomes** (in the shaded left column of the course) define the exit-level competencies students are expected to achieve to complete a course. Each general outcome defines and describes critical behaviours that can be measured and observed. The student must meet the standard specified for **ALL** general outcomes within a course to be successful.

> *Note:*
>
> *CTR3020: Organizational Leadership (pages G.23–G.25) has been withdrawn effective September 2005.*

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CTS, Career Transitions /G.23–G.25
(Revised 2005)

2005 CTS AMENDMENTS
to the
Communication Technology
Guide to Standards and Implementation

Summary of Curriculum Changes

Course withdrawal:

* COM3010: Presentation & Communication 3

Section B

* **Remove** page B.5 (Revised 2004) and **replace** with new page B.5 (Revised 2005).
* **Remove** page B.7 (Revised 2002) and **replace** with new page B.7 (Revised 2005).

Section F

* **Remove** page F.1 (Revised 2002) and **replace** with new page F.1 (Revised 2005).
* **Remove** pages F.3–F.6 (1997) and **replace** with new page F.3–F.6 (Revised 2005).
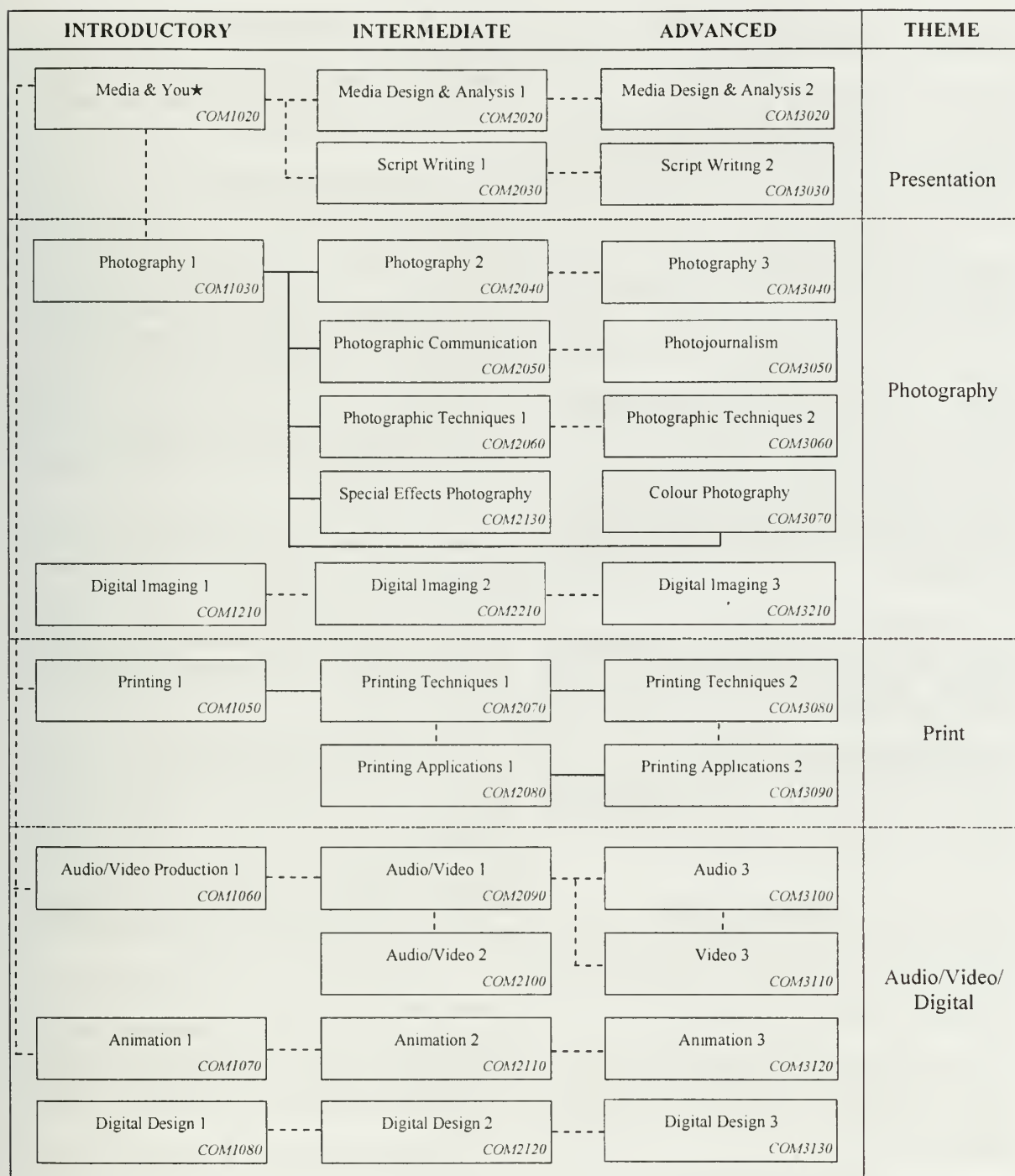* **Remove** page F.31 (1997) and **replace** with new page F.31 (Revised 2005).

Section G

* **Remove** page G.3 (Revised 2002) and **replace** with new page G.3 (Revised 2005).
* **Remove** pages G.55–G.56 (1997) and **replace** with new page G.55–G.56 (Revised 2005).

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Media & You★ *COM1020*	Media Design & Analysis 1 *COM2020*	Media Design & Analysis 2 *COM3020*	Presentation
	Script Writing 1 *COM2030*	Script Writing 2 *COM3030*	
Photography 1 *COM1030*	Photography 2 *COM2040*	Photography 3 *COM3040*	Photography
	Photographic Communication *COM2050*	Photojournalism *COM3050*	
	Photographic Techniques 1 *COM2060*	Photographic Techniques 2 *COM3060*	
	Special Effects Photography *COM2130*	Colour Photography *COM3070*	
Digital Imaging 1 *COM1210*	Digital Imaging 2 *COM2210*	Digital Imaging 3 *COM3210*	
Printing 1 *COM1050*	Printing Techniques 1 *COM2070*	Printing Techniques 2 *COM3080*	Print
	Printing Applications 1 *COM2080*	Printing Applications 2 *COM3090*	
Audio/Video Production 1 *COM1060*	Audio/Video 1 *COM2090*	Audio 3 *COM3100*	Audio/Video/ Digital
	Audio/Video 2 *COM2100*	Video 3 *COM3110*	
Animation 1 *COM1070*	Animation 2 *COM2110*	Animation 3 *COM3120*	
Digital Design 1 *COM1080*	Digital Design 2 *COM2120*	Digital Design 3 *COM3130*	

———— Prerequisite   - - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand
Note: Presentation & Communication 1, 2 and 3 have been withdrawn effective September 2003, 2004 and 2005 respectively.

COURSE DESCRIPTIONS

Course COM1020: Media & You
Students are provided with a hands-on introduction to the various segments of communication studies: presentation and communication, photography, print, and audio/video production.

Course COM1030: Photography 1
Students operate a camera to take photographs and produce prints.

Course COM1050: Printing 1
Students are introduced to basic layout/design techniques and to various print reproduction processes; e.g., offset, screen, electrostatic.

Course COM1060: Audio/Video Production 1
Students acquire basic production skills through the use of simple audio and/or video equipment and techniques.

Course COM1070: Animation 1
Students are introduced to a variety of animation techniques and are given the opportunity to produce simple animation.

Course COM1080: Digital Design 1
Students are introduced to the integration of various media; e.g., audio, video, photographic, graphic, for the purpose of producing a multimedia message.

Course COM1210: Digital Imaging 1
Students will learn the fundamentals of digital image acquisition, using a digital camera. Images will be saved to a folder or directory and manipulated, using bitmap editing software.

Course COM2020: Media Design & Analysis 1
Students explore various media and examine their impact on personal, community and national interests.

Course COM2030: Script Writing 1
Students write sample scripts for a variety of media forms.

Course COM2040: Photography 2
Students review and expand on the concepts outlined in COM1030 Photography 1, including composition, exposure, camera operation, image processing, proofing and enlarging.

Course COM2050: Photographic Communication
Students use photographic prints, slides or digital images to communicate a message or tell a story.

Course COM2060: Photographic Techniques 1
Students expand photographic concepts using various lenses and applying depth of field in composition.

Course COM2070: Printing Techniques 1
Students are introduced to single-register reproductive printing.

Course COM2080: Printing Applications 1
Students apply the technique of single-register printing to practical situations.

Course COM2090: Audio/Video 1
Students expand on basic audio/video production techniques.

Course COM2100: Audio/Video 2
Students build on production skills through application of preproduction and post-production techniques.

Course COM2110: Animation 2
Students build skills in planning, idea development and storytelling technique, and their application through various animation methods.

Course COM2120: Digital Design 2
Students enhance their abilities to integrate various media for the purpose of producing a multimedia message for a target audience, using the computer as a significant production tool.

Course COM2130: Special Effects Photography
Students are introduced to the creative use of the camera, the darkroom and/or digital techniques, in order to produce various photographic effects.

Course COM2210: Digital Imaging 2
Students will acquire digital images from a digital camera and one or more other sources. They will extend and refine their knowledge of bitmap editing software and composition principles, and apply more advanced editing techniques to composite images.

Course COM3020: Media Design & Analysis 2
Students use school and/or community resources to produce messages for a target audience to be delivered through two or more media.

Course COM3030: Script Writing 2
Students refine script-writing skills by producing scripts for specific media formats.

Course COM3040: Photography 3
Students apply various light sources, multiple lighting arrangements and metering techniques with an emphasis on flash and studio lighting.

Course COM3050: Photojournalism
Students are introduced to photojournalism.

Course COM3060: Photographic Techniques 2
Students create special photographic effects through a variety of approaches, including advanced enlarging techniques, high contrast derivations, toning, retouching and print presentation.

Course COM3070: Colour Photography
Students are introduced to colour photography.

Course COM3080: Printing Techniques 2
Students are introduced to multiregister reproductive printing.

Course COM3090: Printing Applications 2
Students apply the technique of multiregister printing to practical situations.

Course COM3100: Audio 3
Students plan, develop and produce specific audio projects.

Course COM3110: Video 3
Students plan, develop and produce specific video projects.

Course COM3120: Animation 3
Students apply production planning techniques to produce animation that tells a story, communicates an idea or message, or creates a mood or theme. Students select and employ traditional animation techniques for the project work..

Course COM3130: Digital Design 3
Students develop and produce multimedia messages within a common theme and for a client who has an identified target audience. Students select and use a variety of media and justify their selection based on the strengths of the media and appropriateness to the task. Digital technology forms a key link in all project work.

Course COM3210: Digital Imaging 2
Students will acquire digital images from a digital camera and one or more other sources. They will extend and refine their knowledge of bitmap editing software and composition principles, and apply more advanced editing techniques to composite images.

COURSE CURRICULUM AND ASSESSMENT STANDARDS:
SECTION F: ADVANCED LEVEL

The following pages define the curriculum and assessment standards for the advanced level of Communication Technology.

> Advanced level courses demand a higher level of expertise and help prepare students for entry into the workplace or a related post-secondary program.

COURSE COM3090: PRINTING APPLICATIONS 2

Level:	Advanced
Theme:	Print
Prerequisite:	COM2080: Printing Applications 1
Description:	Students apply the technique of multiregister printing to practical situations.
Parameters:	Access to layout tables, tools and materials and/or computers with graphic layout capabilities and one or more types of printing equipment/facilities capable of multi-register printing.
Supporting Course:	COM3080 Printing Techniques 2

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• demonstrate a practical print-based task, applying previously learned techniques	• a portfolio consisting of job-related products including:
	 – a camera-ready copy for products requiring multiregister printing
	 – masters used to reproduce the image(s)
	 – finished printed product(s) with the following characteristics:
	   • image is clear and clean
	   • in register and aligned to the printed surface
	 – application of finishing techniques as required.
		90

• select a suitable printing method, prepare masters suitable for the printing task; e.g., offset plate, serigraphic stencil, relief lockup, and reproduce in required quantity		
• print images in register	*Assessment Tool* *Portfolio Assessment, COM3090–1*	
• use finishing techniques as required	*Standard* *Performance rating of 2 for each criteria*	
	• present project work to clients, teacher and/or peers. Student justifies selection of specific techniques used to complete job(s).	10
	Assessment Tool *Presentations/Reports, COM3090–2*	
	Standard *Performance rating of 3 for each criteria*	

COURSE COM3090: PRINTING APPLICATIONS 2 (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Process and Procedures	*The student should:* • produce one or more ideas suitable for a multiregister printing • complete comprehensive layouts incorporating accepted design principles • prepare master(s) using suitable approaches for the printing task • demonstrate responsibility and ethical behaviour by working within school and community standards.	The student should be working independently and with little or no supervision.
Applied Technologies	• produce accurate image placement with the aid of registration guides • print master for each printing task • apply finishing techniques as required.	Consult authorized learning and teaching resources for detailed methodology.
Presentation	• present completed layout(s), master(s) and print(s) for feedback • create and present a portfolio consisting of the layout and samples of the finished product.	The student may use this final portfolio when applying to a post-secondary institution, or when talking to a potential employer.

ASSESSING STUDENT ACHIEVEMENT IN CTS

The CTS assessment standards assess two basic forms of competency:

- What can a student *do*?
    - **make** a product (e.g., wood bowl, report, garment)
    - **demonstrate** a process
        - strand-related competencies (e.g., keyboarding, hair cutting, sewing techniques, lab procedures)
        - basic competencies (e.g., resource use, safety procedures, teamwork).

- What does a student *know*?
    - knowledge base needed to demonstrate a competency (link theory and practice).

CTS Defines *Summative* Assessment Standards

The assessment standards and tools defined for the CTS courses, referenced in Sections D, E and F of this Guide, focus on the final (or summative) assessment of student achievement.

Assessment throughout the learning period (formative assessment) will continue to evaluate how students are progressing. Teachers direct and respond to students' efforts to learn—setting and marking tasks and assignments, indicating where improvement is needed, sending out interim reports, congratulating excellence, etc.

Teachers will decide which instructional and assessment strategies to apply during the formative learning period. As formative and summative assessment are closely linked, some teachers may wish to modify the tools included in this section to use during the instructional process. Teachers may also develop their own summative assessment tools as long as the standards are consistent with the minimum expectations outlined by Alberta Learning.

Grading and Reporting Student Achievement

When a student can demonstrate ALL of the exit-level competencies defined for a 1-credit course (general outcomes), the teacher will designate the course as "successfully completed." The teacher will then use accepted grading practices to determine the percentage grade to be given for the course—a mark not less than 50%.

The time frame a teacher allows a student to develop the exit-level competency is a local decision. NOTE: The *Guide to Education: ECS to Grade 12* specifies that students must have access to 25 hours of instruction for each credit. Students may, however, attain the required competencies in less time and may then proceed to other courses.

Teachers are encouraged to consult their colleagues to ensure grading practices are as consistent as possible. Further information about assessing and reporting student achievement in CTS is provided in the *CTS Manual for Administrators, Counsellors & Teachers* (Assessing Student Achievement).

Components of Assessment Standards in CTS

The following components are included in each 1-credit course:

- **general outcomes** (in the shaded left-hand column) define the exit-level competencies students are expected to achieve to complete the course. Each general outcome defines and describes critical behaviours that can be measured and observed. The student must meet the standard specified for **ALL** the general outcomes within a course to be successful.

2005 CTS AMENDMENTS
to the
Construction Technologies
Guide to Standards and Implementation

Summary of Curriculum Changes

Prerequisite changes:
- CON1070: Building Construction is no longer a prerequisite to:
  - CON2010: Site Preparation
  - CON2020: Concrete Forming
  - CON2030: Alternative Foundations
  - CON2040: Framing Systems 1
  - CON2050: Roof Structures 1
  - CON2060: Exterior Finishing
  - CON2070: Electrical Systems
  - CON2080: Plumbing Systems
  - CON2090: Climate Control Systems
  - CON2100: Agri-structures
  - CON3010: Concrete Work
  - CON3020: Masonry Work
  - CON3030: Wall & Ceiling Finishing
  - CON3040: Stair Construction
  - CON3060: Doors & Trim
  - CON3070: Floorcovering

(CON1010: Basic Tools & Materials is the immediate prerequisite to each of the courses noted above.)

Section B
- **Remove** page B.5 (1997) and **replace** with new page B.5 (Revised 2005).
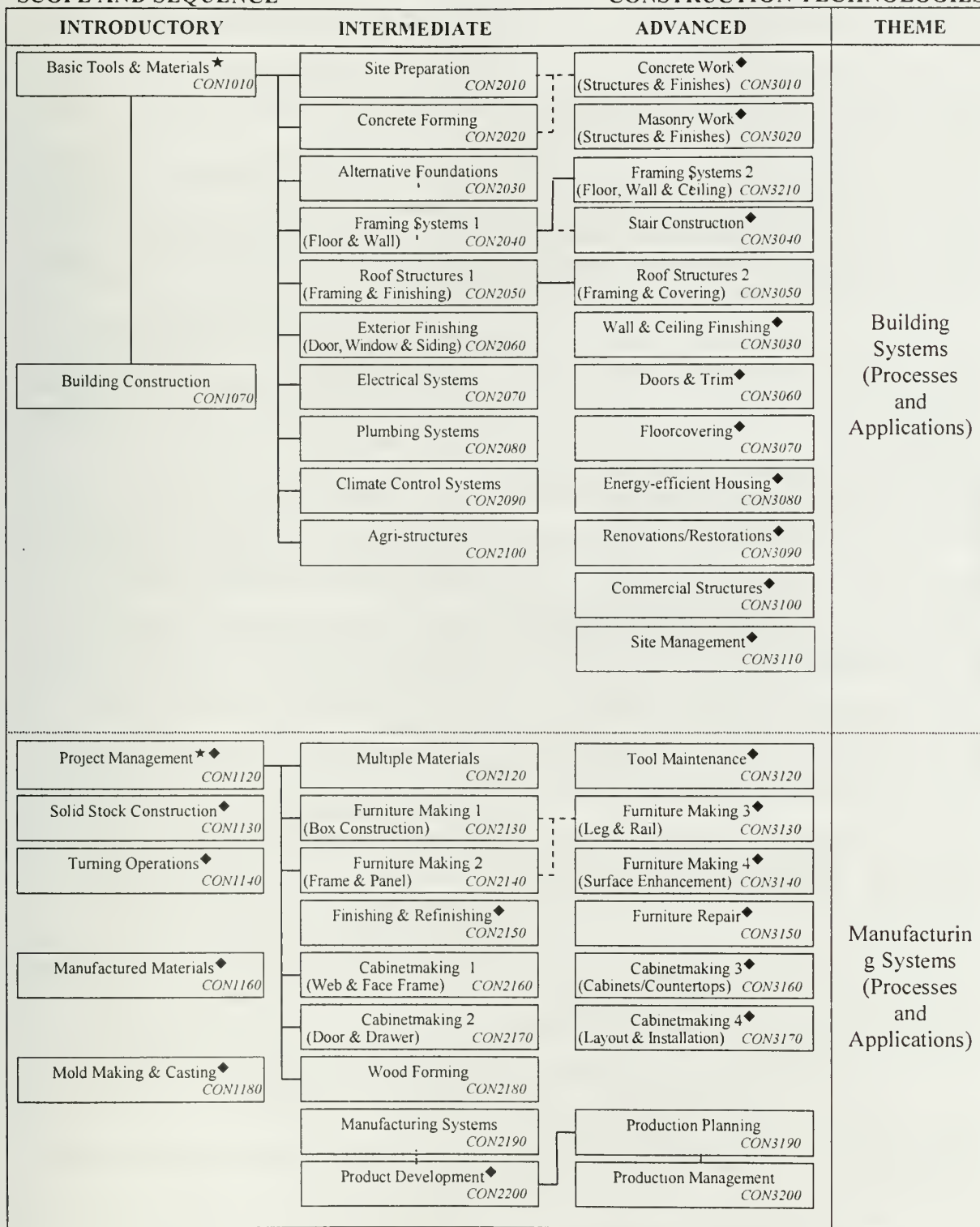
Section E
- **Remove** pages E.3, E.7, E.11, E.15, E.19, E.23, E.27, E.31, E.35 and E.39 (1997) and **replace** with new pages E.3, E.7, E.11, E.15, E.19, E.23, E.27, E.31, E.35 and E.39 (Revised 2005).

Section F
- **Remove** pages F.3, F.7, F.11, F.15, F.23 and F.27 (1997) and **replace** with new pages F.3, F.7, F.11, F.15, F.23 and F.27 (Revised 2005).

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Basic Tools & Materials ★ CON1010	Site Preparation CON2010	Concrete Work ◆ (Structures & Finishes) CON3010	
	Concrete Forming CON2020	Masonry Work ◆ (Structures & Finishes) CON3020	
	Alternative Foundations CON2030	Framing Systems 2 (Floor, Wall & Ceiling) CON3210	
	Framing Systems 1 (Floor & Wall) CON2040	Stair Construction ◆ CON3040	
	Roof Structures 1 (Framing & Finishing) CON2050	Roof Structures 2 (Framing & Covering) CON3050	Building Systems (Processes and Applications)
	Exterior Finishing (Door, Window & Siding) CON2060	Wall & Ceiling Finishing ◆ CON3030	
Building Construction CON1070	Electrical Systems CON2070	Doors & Trim ◆ CON3060	
	Plumbing Systems CON2080	Floorcovering ◆ CON3070	
	Climate Control Systems CON2090	Energy-efficient Housing ◆ CON3080	
	Agri-structures CON2100	Renovations/Restorations ◆ CON3090	
		Commercial Structures ◆ CON3100	
		Site Management ◆ CON3110	
Project Management ★ ◆ CON1120	Multiple Materials CON2120	Tool Maintenance ◆ CON3120	
Solid Stock Construction ◆ CON1130	Furniture Making 1 (Box Construction) CON2130	Furniture Making 3 ◆ (Leg & Rail) CON3130	
Turning Operations ◆ CON1140	Furniture Making 2 (Frame & Panel) CON2140	Furniture Making 4 ◆ (Surface Enhancement) CON3140	
	Finishing & Refinishing ◆ CON2150	Furniture Repair ◆ CON3150	Manufacturing Systems (Processes and Applications)
Manufactured Materials ◆ CON1160	Cabinetmaking 1 (Web & Face Frame) CON2160	Cabinetmaking 3 ◆ (Cabinets/Countertops) CON3160	
	Cabinetmaking 2 (Door & Drawer) CON2170	Cabinetmaking 4 ◆ (Layout & Installation) CON3170	
Mold Making & Casting ◆ CON1180	Wood Forming CON2180		
	Manufacturing Systems CON2190	Production Planning CON3190	
	Product Development ◆ CON2200	Production Management CON3200	

——— Prerequisite   - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.
◆ Refer to specific courses for additional prerequisites.

COURSE DESCRIPTIONS

Course CFS1010: Basic Tools & Materials
Students develop basic hand tool and production skills to transform, safely, common building materials into useful products.

Course CON1070: Building Construction
Students examine common building systems, and develop basic skills related to building a simple model or full size system/structure.

Course CON1120: Project Management
Students develop basic shop drawing and estimating skills, and apply them to build a product.

Course CON1130: Solid Stock Construction
Students develop basic hand and power tool skills to build a product made from solid wood.

Course CON1140: Turning Operations
Students use wood-turning equipment and techniques to create a faceplate and spindle turning made from solid and/or built-up stock.

Course CON1160: Manufactured Materials
Students select and use the appropriate materials and tools to build a product or structure from a wood composite or other manufactured material.

Course CON1180: Mold Making & Casting
Students apply knowledge of casting and molding materials and processes to prepare a mold and produce a casting.

Course CON2010: Site Preparation
Students develop the knowledge and skills to acquire a building permit and to locate and prepare a site for excavation and foundation work.

Course CON2020: Concrete Forming
Students develop knowledge and skills related to the preparation and construction of a concrete foundation.

Course CON2030: Alternative Foundations
Students develop basic knowledge and skills related to the design and construction of an alternative foundation system.

Course CON2040: Framing Systems 1 (Floor & Wall)
Students develop basic framing knowledge and skills associated with the construction of a floor and wall system.

Course CON2050: Roof Structures 1 (Framing & Finishing)
Students develop basic knowledge and skills associated with framing and finishing a simple roof system.

Course CON2060: Exterior Finishing (Door, Window & Siding)
Students apply and develop basic knowledge of door, window and siding systems and installation skills and procedures.

Course CON2070: Electrical Systems
Students apply electrical principles, and develop an understanding of residential electrical code requirements and installation procedures.

Course CON2080: Plumbing Systems
Students develop basic knowledge and skills to fabricate and make repairs to residential drainage, waste, vent (DWV) and water supply systems.

Course CON2090: Climate Control Systems
Students investigate common heating, ventilating and air conditioning (HVAC) systems and principles, and participate in the installation or maintenance of one of these systems.

Course CON2100: Agri-structures
Students apply construction principles and skills, and use pre-engineered designs to build a structure to be used for agricultural purposes.

Course CON2120: Multiple Materials
Students develop a product that incorporates two or more types of material in its construction.

Course CON2130: Furniture Making 1 (Box Construction)
Students develop basic joinery skills and knowledge related to case construction, by producing a box-type piece of furniture.

COURSE CON2010: SITE PREPARATION

Level:	Intermediate
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students develop the knowledge and skills to acquire a building permit and to locate and prepare a site for excavation and foundation work.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.
Supporting Course:	CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify and describe typical building site layout and excavation processes	• presentation of an independently researched report that includes:
	  – identification and use of batterboards, building lines, plumb bob, builder's level and transit
	  – use of the 3, 4, 5 principle (Pythagorean Theorem)
	  – description of excavation methods and equipment
	  – safety precautions with an emphasis on shoring.
	
	Assessment Tool
	  Research Process: Preparing a Building Site, CON2010–1
	
	Standard
	  Performance rating of 2 for each applicable task
		15

• complete an application for a building permit	• completion of a building permit using a recognized form that includes all information required to meet local building standards	15

• apply site preparation skills to assist in the location of building site lines and features	• demonstration of site preparation and teamwork skills to:
	  – establish building lines using batterboards and plumb bobs
	  – lay out building features using a builder's level or transit and the 3, 4, 5 squaring method.
	
	Assessment Tool
	  Activity Assessment: Building Site Layout, CON2010–2
	
	Standard
	  Specific dimensions are within ± 3 mm over 6 metres
	  Performance rating of 2 for each applicable task
		70

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
	The student should:	
Orientation • Building Regulations	• explain the purpose of local, provincial and national building regulations • identify local zoning regulations that limit the type, size and location of new buildings	Point out that in addition to structural regulations, building codes also deal with fire and health issues.
• Site Selection	• identify the parameters for selecting a building site	
• Site Layout	• describe a typical method of establishing lot and building lines as well as grade levels	Students should be able to use the 3–4–5 rule, builder's level, transit and batterboards.
• Lay Out Tools	• explain the use of a plumb bob, builder's level, transit and string line.	Discuss other methods of leveling such as hydro and laser levelling techniques.
Planning and Management • Estimating	• identify the information that is needed to complete an application for a building permit • use site plan and elevation drawings to determine the amount of soil to be excavated	
• Worker Safety	• locate and mark all underground and overhead services • identify soil conditions that may require shoring.	Discuss the importance of having the utility companies mark the location of all underground services.

COURSE CON2020:   CONCRETE FORMING

Level:	Intermediate
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students develop knowledge and skills related to the preparation and construction of a concrete foundation.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.

Supporting Courses: CON2010 Site Preparation; CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• list and describe factors that affect footing and wall design	• a written or oral response that correctly identifies factors that affect footing and wall design, types of forms, form materials, ties and release agents.	25

• identify and describe common forming materials and processes	*Assessment Tool*
	    Response Assessment: Concrete Forming,
	        CON2020–1	

	Standard
	    Terminology should be consistent with that used in
	        Canadian Wood-Frame House Construction
	    Response rating of 2	

• apply concrete forming skills to assist in forming and placing a concrete foundation	• the completion of a project that incorporates full-size formwork or development of a scale model.	75

	Assessment Tool
	    Activity Assessment: Concrete Forming and
	        Placing, CON2020–2	

	Standard
	    Installation of forms is consistent with accepted
	        trade practice. Components are assembled to
	        meet overall specifications to a tolerance of
	        ± 3 mm over 6 metres. Forms are reinforced
	        to maintain their position during placement.
	        The concrete is consolidated to prevent
	        honeycombing and is finished appropriate to
	        the floor system. The concrete is allowed to
	        cure properly before stripping in a manner the
	        preserves the integrity of the footing and wall
	        section
	    Performance rating of 2 for each applicable task	

COURSE CON2020: CONCRETE FORMING (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
 • demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	 • observations of individual effort and interpersonal interaction during the learning process.
	
	 Assessment Tool
	     Basic Competencies Reference Guide and any
	     assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes

 Orientation
 	
 • Soil Condition
	The student should:
	
	 • describe how soils are tested for:
	    − resistance to penetration
	    − shear resistance
	    − moisture content
	
	 • explain how soil, water and frost conditions affect the design and construction of a foundation as well as excavation and safety procedures
		Discuss the load-bearing strengths of different soil types and explain how the strengths affect the footing design.

• Footing and Wall Forming	• explain the purpose of a footing	Explain why footings must be monoliths and be located below the frost line whenever possible.
	• describe one or more common techniques to form footings, walls and piers	Investigate the use of built-in-place and prefabricated forming systems.
	• describe methods of reinforcing a footing and wall section	
	• identify the parts of a typical concrete wall form	Examine methods used to create corner assemblies and to secure the kickplate.
	• explain the difference between box-sill and cast-in-place construction	
	• identify release agents and coatings used on forms	

COURSE CON2030: ALTERNATIVE FOUNDATIONS

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills related to the design and construction of an alternative foundation system.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.

Supporting Courses: CON2020 Concrete Forming; CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe the components of an alternative foundation system	• a written or oral presentation that correctly identifies the materials and design features of one or more alternative foundations systems	25
	and	
• identify the health hazards and precautions related to the use of engineered materials	• knowledge of product labels for safe use and disposal of alternative foundations materials. *Assessment Tool* *Presentations/Reports: Wood Foundations, CON2030–1* *Standard* *Performance rating of 2 for each applicable task*	
• apply construction skills to assist in the design/ construction of an alternative foundation system	• observation of the construction and placement of an alternative foundation or display model. *Assessment Tool* *Activity Assessment: Wood Foundation Framing, CON2030–2* *Standard* *Foundation/display model is built according to local code requirements, components are assembled and appropriately braced. Walls are moisture proofed and correctly back filled. Overall dimensions are within ± 3 mm over 6 meters* *Performance rating of 2 for each applicable task*	75

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
	The student should:	
Orientation • Alternative Systems and Materials	• describe alternative foundation systems and materials such as: – concrete masonry block – preserved wood – foam form	Discuss the advantages and disadvantages of using an alternative foundation system.
• Related Building Codes	• identify local building codes that pertain to the design and construction of alternative foundation systems	
• System Design	• label and describe the parts of a typical preserved wood, masonry block and/or foam form foundation	Explain why walls should be designed to take advantage of block/ sheet sizes.
	• list and describe the factors that determine the design and construction of a footing and wall section for one or more alternative systems	
	• describe levelling and plumbing techniques that are used with a particular foundation system	Discuss typical methods to attach a sill plate to a given wall system.
	• describe recommended methods that are used to control drainage and damp-proof an alternative foundation system	
	• describe the flooring options that can be used with an alternative foundation system.	

COURSE CON2040: FRAMING SYSTEMS 1 (FLOOR & WALL)

Level:	Intermediate
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students develop basic framing knowledge and skills associated with the construction of a floor and wall system.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.
Supporting Course:	CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify and describe the parts of a floor and wall framing system	• a written or oral response that correctly identifies and describes:
	 – floor and wall framing components
	 – framing techniques.
	
	 Assessment Tool
	     Response Assessment: Floor and Wall Framing, CON2040–1
	
	 Standard
	     Response rating of 2
		20

• read and interpret the appropriate drawings and specifications to create a floor and wall framing and sheathing estimate	• a detailed list and cost of materials taken from a given working drawing of a floor and wall component.
	
	 Assessment Tool
	     Activity Assessment: Floor and Wall Framing, CON2040–2
	
	 Standard
	     Estimate includes allowances for floor and wall openings, over-run and waste considerations
	     Performance rating of 2 for each applicable task
		20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• apply framing skills to assist in the layout and construction of floor and wall components	• the observation of framing skills through on-site, in-shop or mock-up work.
	
	Assessment Tool
	  Activity Assessment: Floor and Wall Framing, CON2040–2
	
	Standard
	  The floor and wall components are framed according to conventional building practices and specified dimensions are within ± 3 mm over 6 metres
	  Performance rating of 2 for each applicable task
		60

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Orientation • Materials • Fasteners	*The student should:* • describe common wood defects associated with natural growth and milling operations • compare the span limitations of different species and grades of lumber and manufactured components • identify common types of sheathing and subflooring materials • identify the adhesives and fasteners used in conjunction with floor and wall framing	If a framing project requires more than 25 hours, or is more advanced, add a project module from Career Transitions or combine with CON3210: Framing Systems 2 (Floor, Wall & Ceiling)

COURSE CON2050:   ROOF STRUCTURES 1 (FRAMING & FINISHING)

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills associated with framing and finishing a simple roof system.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.

Supporting Course: CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe the different styles and parts of a roof system	• a written or oral response that correctly identifies and describes basic roof styles and roofing components. *Assessment Tool* *Response Assessment: Roof Construction,* *CON2050–1* *Standard* *Response rating of 2*	10
• read and interpret the appropriate drawings and specifications to create a roof framing and finishing estimate	• description and quantities of materials required to frame, sheath and apply a finished covering on a typical roof. *Assessment Tool* *Activity Assessment: Roof Construction,* *CON2050–2* *Standard* *Estimate includes all allowances for roof openings,* *over-run and waste requirements* *Performance rating of 2 for each applicable task*	20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• apply roofing skills to assist in the framing and finishing of a roof structure	• demonstration of framing and finishing skills. *Assessment Tool* *Activity Assessment: Roof Construction, CON2050–2* *Standard* *The roof is framed and covered according to conventional building practice. Specified dimensions are within ± 3 mm over 6 metres* *Performance rating of 2 for each applicable task*	70
• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Orientation • Roof Structures	*The student should:* • list and describe the common styles of roofs • define roof terms such as span, run, rise, slope and overhang • describe the parts of a common rafter • describe the parts of a typical roof truss • describe the advantages of using roof trusses versus standard common rafters • list and describe the parts of a boxed cornice • identify sheathing grades and types; joint and nailing patterns • list and describe the types of roof finishes.	Focus mainly on simple roof structures and coverings in this module. Intersecting roof structures are covered in CON3050: Roof Structures 2 (Framing & Covering). Discuss issues related to the installation of air/ vapour barriers and insulation. Refer to building codes for proper sheathing grades, nail sizes and spacing.

COURSE CON2060: EXTERIOR FINISHING (DOOR, WINDOW & SIDING)

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply and develop basic knowledge of door, window and siding systems and installation skills and procedures.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.

Supporting Course: CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe common types of exterior doors, windows and siding materials	• a written or oral presentation that correctly identifies at least three different exterior doors, exterior window types and siding materials. *Assessment Tool* *Presentations/Reports: Window/Door and Siding Materials, CON2060–1* *Standard* *Performance rating of 2 for each applicable task*	10
• read and interpret the appropriate drawings and specifications to create a door and window schedule and siding estimate	• development of an accurate exterior door and window schedule and description of materials and quantities of siding required in a given set of plans. *Assessment Tool* *Assessment Framework: Activity Assessment, CONACT* *Standard* *Estimate includes all allowances for wall openings, over-run and waste requirements Performance rating of 2 for each applicable task*	20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• apply finishing skills to install a prehung door, a window unit and siding materials	• demonstration of door, window and siding systems skills. *Assessment Tool* *Assessment Framework: Activity Assessment, CONACT* *Standard* *Doors, windows and siding systems are installed in keeping with accepted trade practice and manufacturers' recommendations* *Performance rating of 2 for each applicable task*	70
• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
	The student should:	
Orientation		
• Doors and Windows	• list and describe common types of exterior doors and windows	Explain the advantages and disadvantages of each style of door or window.
	• identify methods of sizing windows and exterior doors	
	• describe the procedures used to install an exterior door and window	
• Siding Components	• list and describe the components used in conjunction with the installation of vinyl and aluminum siding	Stress the importance of making provisions for the siding to expand and contract during heating and cooling.
	• describe the purpose and use of building papers and other house wrap materials.	

COURSE CON2070:   ELECTRICAL SYSTEMS

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply electrical principles, and develop an understanding of residential electrical code requirements and installation procedures.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with specialized training in electrical work.

Supporting Course: CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• list and describe the electrical systems and components associated with residential wiring	• the presentation of a written or oral presentation that identifies and describes the electrical systems found in a typical residence.
	
	Assessment Tool
	    Presentation/Reports: Electrical Systems,
	        CON2070–1
	
	Standard
	    Performance rating of 2 for each applicable task
		10

• apply wiring principles and code requirements to create a wiring diagram	• the development of an electrical drawing of a typical room such as a bathroom, living room or bedroom.
	
	Assessment Tool
	    Activity Assessment: Branch Wiring, CON2070–2
	
	Standard
	    The working drawing uses standard symbols showing the location and type of outlet, light or switch. Connections between switches and lights are shown along with the electrical service entry
	    Performance rating of 2 for each applicable task
		20

COURSE CON2070: ELECTRICAL SYSTEMS (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• apply wiring skills to assist in the installation of a residential wiring system	• installation of an electrical system to include the required switches, lights and outlets found in a typical room. *Assessment Tool* *Activity Assessment: Branch Wiring, CON2070–2* *Standard* *Installation meets accepted trade practice and code requirements* *Performance rating of 2 for each applicable task*	60
• profile a trade or occupation within the electrical field	• presentation of an occupation profile that outlines: – present and future employment opportunities – training centres and entry requirements – description of occupation and working conditions. *Assessment Tool* *Research Process: Career Opportunities in Electrical Work: CON2070–3* *Standard* *Performance rating of 2 for each applicable task*	10
• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

COURSE CON2080: PLUMBING SYSTEMS

Level:	Intermediate
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students develop basic knowledge and skills to fabricate and make repairs to residential drainage, waste, vent (DWV) and water supply systems.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in plumbing.
Supporting Course:	CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify and describe the parts of a residential plumbing system	• a written or oral presentation that correctly identifies the:
	   – components of a water supply system
	   – drainage, waste and vent components
	   – types of pipe and fittings used on each of these systems.
	
	 Assessment Tool
	   Presentations/Reports: Common Plumbing
	     Systems, CON2080–1
	
	 Standard
	   Performance rating of 2 for each applicable task
		10

• create a drawing of a water supply, drainage, waste and vent system for a typical plumbing fixture	• a plan for a water supply and DWV system for a household fixture in a bathroom or kitchen.
	
	 Assessment Tool
	   Activity Assessment: Installing a Plumbing
	     Fixture, CON2080–2
	
	 Standard
	   The plan is consistent with conventional plumbing
	     practice and code requirements
		15

COURSE CON2080: PLUMBING SYSTEMS (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• apply plumbing skills to assist in the installation of a water supply, waste and vent system	• demonstrations of appropriate work skills related to installation of a plumbing fixture.
	
	Assessment Tool
	  Activity Assessment: Installing a Plumbing Fixture, CON2080–2
	
	Standard
	  Installation practices should correspond to those accepted in the plumbing industry
	  Performance rating of 2 for each applicable task
		65

• profile a trade or occupation within the plumbing field	• presentation of an occupation profile that outlines:
	  – description of the occupation and working conditions
	  – employment opportunities
	  – training centres and entry requirements.
	
	Assessment Tool
	  Research Process: Career Opportunities in Plumbing, CON2080–3
	
	Standard
	  Performance rating of 2 for each applicable task
		10

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

COURSE CON2090:   CLIMATE CONTROL SYSTEMS

Level:	Intermediate
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students investigate common heating, ventilating and air conditioning (HVAC) systems and principles, and participate in the installation or maintenance of one of these systems.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in sheet metal and climate control installation/service.
Supporting Course:	CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• list and describe the major components of a typical heating, ventilating and air conditioning system	• the accurate identification and description of the components given a representation of a typical residential HVAC system. *Assessment Tool* *Response Assessment: Heating, Ventilating and Cooling Systems, CON2090–1* *Standard* *Response rating of 2*	10
• prepare a preventive maintenance schedule for a heating, ventilating and/or air conditioning system	• a comprehensive preventive maintenance schedule for a given component within a HVAC system. *Assessment Tool* *Activity Assessment: Maintaining/Installing a HVAC System, CON2090–2* *Standard* *The schedule should take into account the frequency and amount of use, condition of use and manufacturer's recommendations* *Performance rating of 2 for each applicable task*	20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• service or install a heating, ventilating and/or air conditioning system	• demonstration of skills related to the installation and/or servicing of a typical residential HVAC component.
	
	Assessment Tool
	    Activity Assessment: Maintaining/Installing a HVAC System, CON2090–2
	
	Standard
	    Installation and servicing procedure are performed according to the manufacturer's recommendations
	    Performance rating of 2 for each applicable task
		60

• profile a trade or occupation within the heating and air conditioning fields	• presentation of an occupation/trade profile that outlines:
	    – description of the occupation and working conditions
	    – present and future employment opportunities
	    – training centres and requirements.
	
	Assessment Tool
	    Research Process: Career Opportunities in Heating & Air Conditioning, CON2090–3
	
	Standard
	    Performance rating of 2 for each applicable task
		10

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

COURSE CON2100: AGRI-STRUCTURES

Level: Intermediate

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply construction principles and skills, and use preengineered designs to build a structure to be used for agricultural purposes.

Parameters: Access to a building site and/or construction facilities and to instruction from an individual with specialized training in carpentry or metal work.

Supporting Course: CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify the major issues that must be addressed when designing an agri-structure	• presentation of a written project brief that identifies and describes the major factors to be considered when designing, planning and constructing an agri-structure, such as: – human and environmental safety – animal comfort and safety – crop protection – cost of construction	10
• read and interpret the appropriate drawings and specifications to create a material and cost estimate	• appropriate design selection, modification or creation of an agri-structure design that meets Alberta Agriculture standards and local code requirements	20

• construct a structure for use in agriculture	• demonstration of appropriate construction and fabrication skills.
	
	 Assessment Tool
	     Project Assessment: Building an Agri-Structure, CON2100–1
	
	 Standard
	     The appropriate materials are selected and ordered. The structure should be accurately laid out, assembled and finished according to conventional building practices
	     Performance rating of 2 for each applicable task
		70

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Orientation
 	
• Materials and Structures
	The student should:
	
	• describe the types of materials and structures used in agriculture businesses
	
	• list the factors that affect the choice of materials and design of agri-structure such as:
	  – human and environmental safety standards
	  – animal comfort and safety
	  – crop protection
	  – conditions of use
	  – ease of construction and maintenance
	  – material cost.
		This module provides students with the opportunity to apply basic construction principles and practices to farm-type buildings and structures.

Planning and Management
 	
• Structural Designs
 	
• Estimating and Scheduling
	• produce/select an agri-structure design that:
	  – uses two or more types of structural materials
	  – applies basic construction principles and processes
	  – meets industry standards
	
	• estimate the cost of materials and prepare a work schedule.	

COURSE CON3010: CONCRETE WORK (STRUCTURES & FINISHES)

Level:	Advanced
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students develop essential skills to form, place and finish a concrete project.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in concrete work.
Supporting Courses:	CON1070 Building Construction CON2010 Site Preparation CON2020 Concrete Forming

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe concrete forming, placing and finishing techniques	• a written report or display that accurately represents accepted forming, placing and finishing trade practices. *Assessment Tool* 　*Research Process: Concrete Forming, Placing and Finishing, CON3010–1* *Standard* 　*Performance rating of 3 for each applicable task*	20
• use the appropriate tools, materials and processes to form, reinforce, place and finish a concrete structure	• demonstration of concrete forming, placing and finishing techniques. *Assessment Tool* 　*Assessment Framework: Activity Assessment, CONACT* *Standard* 　*The project should be free of voids and finished in a manner appropriate to its application* 　*Performance rating of 3 for each applicable task*	65
• create a profile of a trade or occupation within the field of concrete work	• presentation of an occupational profile that includes a description of working conditions, employment and training opportunities related to concrete work. *Assessment Tool* 　*Research Process: Concrete Forming, Placing and Finishing, CON3010–1* *Standard* 　*Performance rating of 3 for each applicable task*	15

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Orientation • Concrete Mixing and Testing	*The student should:* • research the effect aggregate, water and cement ratios have on the workability and quality of a concrete mix	Emphasize the importance of using clean aggregate and water.
	• list and describe the purpose of different cement types	
	• identify the types of tests and reasons for concrete testing	Demonstrate the slump test and describe compression testing.

• Forming	• describe standard forming and reinforcing practices for a project; e.g.:
	   – slab on grade
	   – retaining wall
	   – poured stairs
		Explain why rebar should be free of loose rust, scale grease and other foreign matter.

	• explain the purpose of a control and expansion joint in a concrete structure	

• Placement and Finishing	• identify the purpose and describe the process of:
	   – screeding
	   – puddling
	   – striking off
	   – floating
	   – troweling
	   – finishing
	   – curing
		Identify required protection of rebar exposed to the weather or ground.

• Fasteners	• describe common methods of installing fasteners in concrete before and after the concrete has set up and cured	

COURSE CON3020: MASONRY WORK (STRUCTURES & FINISHES)

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills related to masonry materials, structures and finishes.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with specialized training in masonry work.

Supporting Courses: CON1070 Building Construction
CON3010 Concrete Work (Structures & Finishes)

Curriculum and Assessment Standards

General Outcome	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe common types of masonry materials and finishes	• written response that correctly identifies and describes three different masonry materials and finishes. *Assessment Tool* *Research Process: Masonry Materials and Finishes, CON3020–1* *Standard* *Performance rating of 3 for each applicable task*	10
• read and interpret a working drawing to prepare a cost estimate of a masonry surface	• preparation of a cost estimate that includes cost of materials and labour	15
• apply masonry skills to assist in the application of a masonry finish or in the construction of a masonry structure	• demonstration of acceptable works skills in relation to the application of a masonry finishes or construction of a masonry structure. *Assessment Tool* *Assessment Framework: Activity Assessment, CONACT* *Standard* *Finishes are applied and structure built in keeping with accepted trade practice* *Performance rating of 3 for each applicable task*	65

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
 • create a profile of a trade or occupation within the field of masonry work
	Assessment of student achievement should be based on:
	
	 • presentation of an occupational profile that includes:
	   – working conditions
	   – employment opportunities
	   – training and entry requirements
	   – describe opportunities for career advancement and self employment.
	
	 Assessment Tool
	   Research Process: Masonry Materials and
	     Finishes, CON3020–1
	
	 Standard
	   Performance rating of 2 for each applicable task
		10

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process.
	
	 Assessment Tool
	   Basic Competencies Reference Guide and any
	     assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes

Orientation
 	
 • Brick Veneering
	The student should:
	
	 • explain reasons for using a masonry finish over other types of finishes
	
	 • analyze a brick veneer wall section and determine the method that is used to:
	   – support the weight of the brick
	   – attach the bricks to the wall surface
	   – prevent moisture build-up between the wall surfaces
	
	 • describe the different sizes, textures and grades of bricks
	
	 • identify common types of patterns and bonds used in brick structures and veneering
		Discuss factors such as:
		 • appearance
		 • durability
		 • lower upkeep
		 • lower risk of fire.

COURSE CON3030: WALL & CEILING FINISHING

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop basic knowledge and skills to insulate, install and finish an interior wall/ceiling surface.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with specialized training in carpentry.

Supporting Courses: CON1070 Building Construction
CON2040 Framing Systems 1 (Floor & Wall)

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• describe the procedures related to the installation of insulation and vapour barrier to an exterior wall and ceiling	• a written response that correctly describes the procedures employed in the selection and installation of insulation, vapour barrier and wall/ceiling boards	25
• identify and describe the health hazards and safety precautions associated with the use of insulating, drywalling and finishing materials	• the identification of health and safety issues related to the handling and use of insulation and wallboard materials. *Assessment Tool* *Response Assessment: Insulating and Drywalling, CON3030–1* *Standard* *Response rating of 3*	
• prepare, apply and finish a wall and ceiling surface	• demonstration of appropriate skills and techniques in the application of a wall/ceiling treatment given an on-site or mock-up project. *Assessment Tool* *Activity Assessment: Installing and Finishing Drywall, CON3030–2* *Standard* *Materials have been selected and installed in keeping with the specifications, accepted trade practice and local code requirements.* *Surfaces are finished smooth and free of voids* *Performance rating of 3 for each applicable task*	75

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Orientation • Materials	*The student should:* • list and describe the types of wall and ceiling insulation and soundproofing materials • describe the different types of drywall and conditions of use • identify the building codes that relate to the installation of insulation, vapour barrier and drywall • identify and describe the different types of tapes, corner beads, adhesives and fastening devices used with gypsum board	Not only does insulation reduce heat loss, it also can retard the spread of sound and fire.
• Material Application	• describe methods of cutting, attaching, taping, filling, sanding and texturing a gypsum board • describe methods of making repairs to small and large holes in a drywall surface • identify the materials used to paint and decorate a wall surface • research common methods used to apply paint to a surface; e.g., − brush − roller − spray.	Avoid fillers that contain asbestos and paints that contain lead.

COURSE CON3040: STAIR CONSTRUCTION

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students develop the knowledge and skills required to build a straight flight of stairs.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with formal, specialized training in carpentry.

Supporting Courses: CON1070 Building Construction
CON2040 Framing Systems 1 (Floor & Wall)

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe different stair types, component parts and construction techniques	• presentation of a written research project that identifies and describes four different stair and stringer types	15
• interpret building code regulations pertaining to residential stair design	• completion of a "Spec Sheet" that outlines the code requirements pertaining to a specific stair application.	15
	Assessment Tool *Research Process: Stair Construction, CON3040–1*	

	Standard
	    The specifications should accurately address the allowable type and size of nosing, the amount of head room and unit rise and run
	    Performance rating of 3 for each applicable task	

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• design, lay out and construct a straight flight of stairs	• the construction of a full-size or scaled straight run stair containing no less than three cut-out dadoed or mitered risers.	70

	Assessment Tool
	  Activity Assessment; Stair Construction,
	    CON3040–2	

	Standard
	  The stair or model should conform in all ways to residential codes and standards and fit within the parameters of the stair well opening, total rise, headroom and nosing requirements. All dimensions are to be within ± 3 mm, and all joints should be tight and flush and finished as specified
	  Performance rating of 3 for each applicable task	

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process.	Integrated throughout
	Assessment Tool *Basic Competencies Reference Guide and any assessment tools noted above*	

Concept	Specific Outcomes	Notes
	The student should:	
Orientation		
• Stair and Rail Construction	• identify stair types, materials and methods of construction	
	• research and identify the parts of a stair and railing system	Refer to residential code requirements and Occupational Health and Safety guidelines.

COURSE CON3060: DOORS & TRIM

Level: Advanced

Theme: Building Systems (Processes and Applications)

Prerequisite: CON1010 Basic Tools & Materials

Description: Students apply basic finish carpentry knowledge and skills to install doors, railings and moldings.

Parameters: Access to a building site and/or construction facility and to instruction from an individual with formal, specialized training in carpentry.

Supporting Course: CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify common types of doors, hardware and trim products	• presentation of a written research project that correctly identifies the common types and sizes of sliding, folding and swing doors; related hardware and trim products.
	
	 Assessment Tool
	     Research Process: Installing Interior Doors and
	         Trim, CON3060–1
	
	 Standard
	     Performance rating of 3 for each applicable task
		20

• install doors, moldings and other trim products	• installation of at least one door type and trim product.
	
	 Assessment Tool
	     Assessment Framework: Activity Assessment,
	         CONACT
	
	 Standard
	     The door frame should be plumb, appropriately
	         secured and cased. The door should operate
	         smoothly and trim products applied according
	         to accepted trade practices
	     Performance rating of 3 for each applicable task
		70

COURSE CON3060: DOORS & TRIM (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• create a profile of a trade or occupation within the finish carpentry field	• presentation of an occupational profile that includes:
	– a description of the trade or occupation
	– training requirements
	– opportunities for career advancement and self-employment.
	
	Assessment Tool
	    Research Process: Installing Interior Doors and Trim, CON3060–1
	
	Standard
	    Performance rating of 3 for each applicable task
		10

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
	The student should:	
Orientation		
• Materials	• list and describe the types of components and moldings that are used in conjunction with the installation and finishing of: – railings – doors – columns – floors and ceiling	
• Door Installation	• describe the different ways doors are constructed • label the parts of a panel door. • describe the common types of joints and methods of measuring and cutting used to install various moldings and casings such as miter, coped and butt joint.	

COURSE CON3070: FLOORCOVERING

Level:	Advanced
Theme:	Building Systems (Processes and Applications)
Prerequisite:	CON1010 Basic Tools & Materials
Description:	Students develop skills in selecting and installing typical floor coverings used in residential, institutional and commercial buildings.
Parameters:	Access to a building site and/or construction facility and to instruction from an individual with specialized training in floor covering.
Supporting Course:	CON1070 Building Construction

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe common types of residential, institutional and commercial floor coverings	• presentation of a written research project that identifies and describes four major floor types (resilient sheet or tile, wood, ceramic and carpet). *Assessment Tool* *Research Process: Installing Floor Coverings,* *CON3070–1* *Standard* *Performance rating of 3 for each applicable task*	30
• apply flooring skills to assist in the installation of a floor covering	• demonstration of appropriate skills in the application of one or more flooring materials given an on-site or mock-up project. *Assessment Tool* *Assessment Framework: Activity Assessment,* *CONACT* *Standard* *Materials have been selected and installed in* *keeping with the manufacturer's* *recommendations and accepted trade practice.* *Joints are tight and patterns are aligned* *accurately; surfaces are smooth and free from* *blemishes* *Performance rating of 3 for each applicable task*	60

COURSE CON3070: FLOOCOVERING (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• create a profile of a trade or occupation within the floor covering field	• presentation of an occupational report that includes a description of the working conditions, job opportunities and training requirements.	10
	Assessment Tool *Research Process: Installing Floor Coverings, CON3070–1*	
	Standard *Performance rating of 3 for each applicable task*	
• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process.	Integrated throughout
	Assessment Tool *Basic Competencies Reference Guide and any assessment tools noted above*	

Concept	Specific Outcomes	Notes
	The student should:	
Orientation		

• Floor Covering Materials	• list and describe common types of residential and commercial floor covering materials; e.g.:
	    – resilient (vinyl, rubber, cork)
	    – carpet
	    – ceramic tile
	    – wood	

	• identify the factors that are used to determine the selection of a floor covering	
	• explain how concrete and wood floors differ in the way they are prepared for a floor covering	
	• identify appropriate adhesives and fasteners for a given covering	

2005 CTS AMENDMENTS
to the
Cosmetology Studies
Guide to Standards and Implementation

Summary of Curriculum Changes

Prerequisite changes:
- Introductory:
  - COS1040: Forming & Finishing 1
  - COS1050: Permanent Waving 1
  - COS1080: Theatrical Makeup 1
- Intermediate—all courses **except:**
  - COS2010: Hair Graphics 2
  - COS2130: Facials & Makeup 2
  - COS2150: Manicuring 2
  - COS2210: Sales and Service 1
- Advanced—**all** courses.

(All prerequisite requirements, rather than just the immediate prerequisite, for each 1-credit course are listed in the *Guide to Standards and Implementation* for Cosmetology Studies.)

Section B
- **Remove** pages B.5–B.6 (Revised 2002) and **replace** with new pages B.5–B.6 (Revised 2005).

Section D
- **Remove** page D.13 (Revised 2002) and **replace** with new page D.13 (Revised 2005).
- **Remove** page D.17 (1997) and **replace** with new page D.17 (Revised 2005).
- **Remove** page D.27 (Revised 2002) and **replace** with new page D.27 (Revised 2005).

Section E
- **Remove** pages E.5, E.9, E.13, E.17, E.21, E.27, E.31, E.35, E.39, E.43, E.47, E.51, E.55, E.59, E.63, E.65, E.67, E.71 and E.75 (Revised 2002) and **replace** with new pages E.5, E.9, E.13, E.17, E.21, E.27, E.31, E.35, E.39, E.43, E.47, E.51, E.55, E.59, E.63, E.65, E.67, E.71 and E.75 (Revised 2005).

Section F
- **Remove** pages F.3, F.5, F.7, F.9, F.13, F.17, F.21, F.25, F.29, F.33, F.37, F.43, F.47, F.51, F.55, F.59, F.63, F.67, F.69, F.73, F.75, F.79, F.85, F.87, F.89, F.93, F.97, F.101 and F.103 (Revised 2002) and **replace** with new pages F.3, F.5, F.7, F.9, F.13, F.17, F.21, F.25, F.29, F.33, F.37, F.43, F.47, F.51, F.55, F.59, F.63, F.67, F.69, F.73, F.75, F.79, F.85, F.87, F.89, F.93, F.97, F.101 and F.103 (Revised 2005).
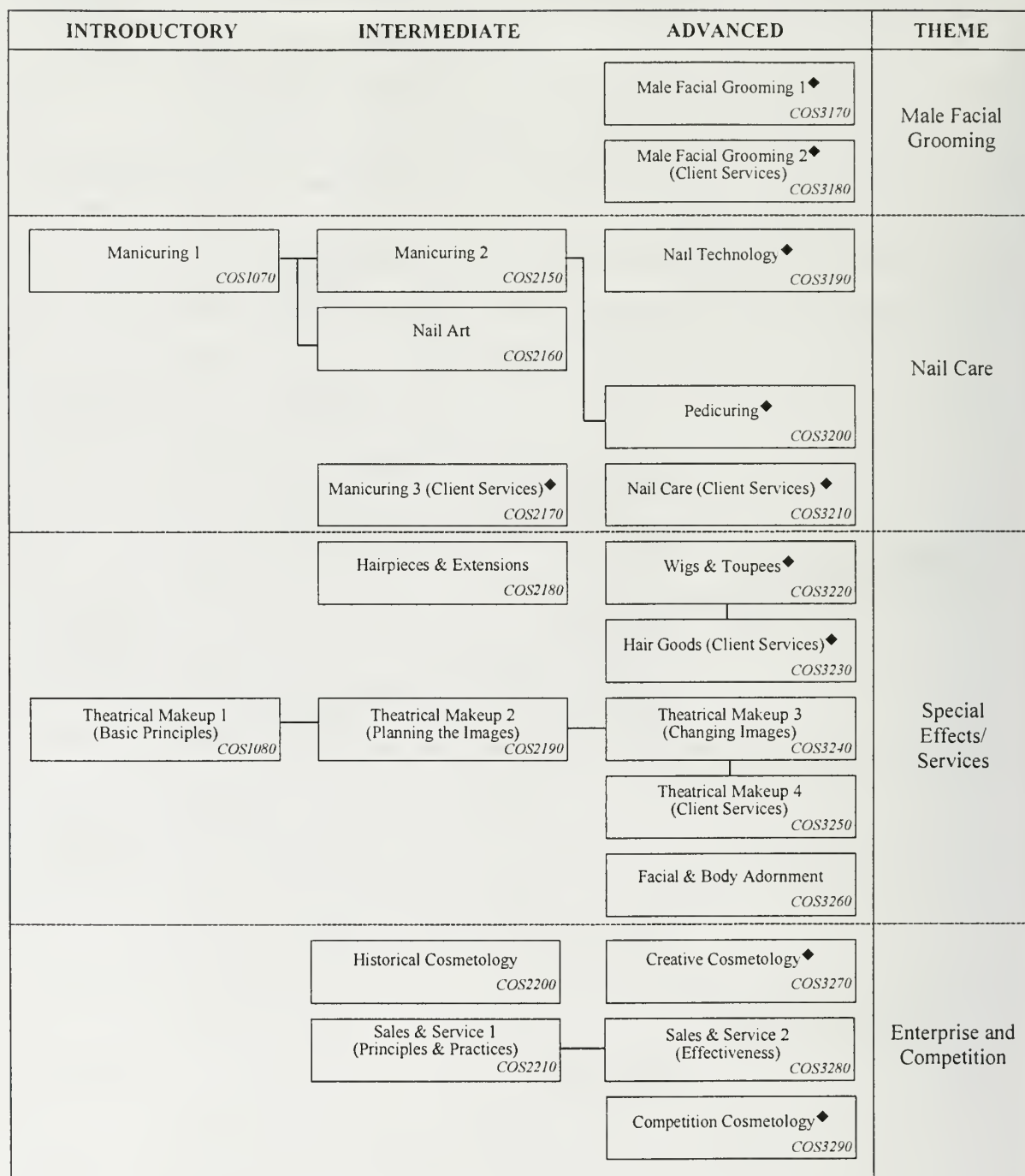
INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Personal Images ● COS1010		Professional Practices COS3010	Images and Practices
Hair Graphics 1 COS1020	Hair Graphics 2 COS2010	Long Hair Graphics COS3020	Hair and Scalp Care
Hair & Scalp Care 1 COS1030	Hair & Scalp Care 2 COS2020	Hair & Scalp Care 3 COS3030	
Forming & Finishing 1 COS1040	Forming & Finishing 2 COS2030	Hair & Scalp Care 4 (Client Services) COS3040	
	Haircutting 1 COS2040	Haircutting 2 ◆ COS3050	Haircutting
		Haircutting 3 ◆ (Client Services) COS3060	
	Hair Care & Cutting 1 (Client Services) COS2050	Hair Care & Cutting 2 ◆ (Client Services) COS3070	
Permanent Waving 1 (The Physical Process) COS1050	Permanent Waving 2 (Cold Waving) COS2060	Permanent Waving 5 ◆ (Designer) COS3080	Chemical Services: Permanent Waving
	Permanent Waving 3 (Heat-assisted) COS2070	Relax/Straighten Hair ◆ COS3090	
	Permanent Waving 4 ◆ (Client Services) COS2080	Wave, Relax & Straighten Hair ◆ (Client Services) COS3100	
	Colouring 1 ◆ COS2090	Colouring 2 (Permanent) ◆ COS3110	Chemical Services: Haircolouring
	Colour Removal 1 ◆ COS2100	Colour Removal 2 ◆ COS3120	
	Colouring & Removal 1 ◆ (Client Services) COS2110	Colouring & Removal 2 ◆ (Client Services) COS3130	
Skin Care 1 (Basic Practices) COS1060	Facials & Makeup 1 COS2120	Body Therapy ◆ COS3140	Skin Care
	Facials & Makeup 2 (Client Services) COS2130	Hair Removal ◆ COS3150	
	Skin Care 2 (Client Services) COS2140	Skin Care 3 (Client Services) ◆ COS3160	

Note: There are extensive prerequisite requirements that are too complex to be depicted in this scope and sequence chart.

● Prerequisite to all introductory courses in this strand.
◆ Please refer to specific courses for additional prerequisites.

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
		Male Facial Grooming 1 ◆ *COS3170* Male Facial Grooming 2 ◆ (Client Services) *COS3180*	Male Facial Grooming
Manicuring 1 *COS1070*	Manicuring 2 *COS2150* Nail Art *COS2160* Manicuring 3 (Client Services) ◆ *COS2170*	Nail Technology ◆ *COS3190* Pedicuring ◆ *COS3200* Nail Care (Client Services) ◆ *COS3210*	Nail Care
Theatrical Makeup 1 (Basic Principles) *COS1080*	Hairpieces & Extensions *COS2180* Theatrical Makeup 2 (Planning the Images) *COS2190*	Wigs & Toupees ◆ *COS3220* Hair Goods (Client Services) ◆ *COS3230* Theatrical Makeup 3 (Changing Images) *COS3240* Theatrical Makeup 4 (Client Services) *COS3250* Facial & Body Adornment *COS3260*	Special Effects/ Services
	Historical Cosmetology *COS2200* Sales & Service 1 (Principles & Practices) *COS2210*	Creative Cosmetology ◆ *COS3270* Sales & Service 2 (Effectiveness) *COS3280* Competition Cosmetology ◆ *COS3290*	Enterprise and Competition

Note. There are extensive prerequisite requirements that are too complex to be depicted in this scope and sequence chart.

◆ Please refer to specific courses for additional prerequisites.

COURSE COS1040:   FORMING & FINISHING 1

Level:	Introductory
Theme:	Hair and Scalp Care
Prerequisite:	COS1010 Personal Images
Description:	Students wave, curl and style hair, using a variety of equipment, tools and supply items.
Parameters:	Access to a personal or professional grooming facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify and describe techniques available for forming and finishing hair	• **Concept Testing** in which the student will:
	– given 30 questions relating to forming and finishing, answer a minimum of 25 questions correctly.
	
	Assessment Tool
	Board Exam Review for Cosmetology:
	  – *Finger Waving*
	  – *Wet Hairstyling*
	  – *Thermal Hairstyling*
		25

• select and use appropriate equipment, implements and materials for forming and finishing hair into selected hair effects and hairstyles • perform all forming and finishing activities in a safe and sanitary manner	• **Product** in which the student will: – perform forming and finishing techniques suited to selected hairstyles and hair effects to quality, safety and sanitation standards. *Assessment Tool* *COSTAT1040: Forming & Finishing 1*	75
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Forming Hair (Theory)	*The student should:*
	• define and describe the term forming hair
	• describe techniques used to form hair:
	  – blow-drying/blow waving
	  – ironing
	  – waving
	  – pin curling
	  – hand shaping
	• identify and describe implements used to form hair:
	  – blow-dryers
	  – curling irons
	  – rollers
	  – clips
	  – setting combs
	  – brushes
	  – combs.	

Materials	• identify and describe materials used to assist forming of hair:
	  – mousse
	  – gels
	  – lotions.	

Draping	• drape client for a dry service • remove draping after completing the dry service.	

Forming Hair (Applications)
 	
• Blow-Drying/Blow Waving
	• describe and demonstrate safe handling of hair forming implements to protect:
	  – self
	  – clients
	  – others
	• identify and safely operate blow-dryer controls
	• demonstrate use of blow-dryer in combination with a comb or brush to:
	  – dry and control hair
	  – direct hair
	  – shape hair
		Have students read manufacturer's instructions before use.

COURSE COS1050: PERMANENT WAVING 1 (THE PHYSICAL PROCESS)

Level: Introductory

Theme: Chemical Services: Permanent Waving

Prerequisite: COS1010 Personal Images

Description: Students section, block and wind hair for a basic permanent wave, using conventional waving rods and supplies.

Parameters: Access to personal or professional grooming facility.

Note: Journeyman hairstylist qualification desirable.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• describe the history of permanent waving	• **Concept Testing** in which the student will: − present a verbal, written or other description of the history of permanent waving	10

• distinguish between the physical and chemical processes involved in the permanent waving of hair	− given 20 questions relating to permanent waving— the physical process, answer all questions correctly.
	
	Assessment Tool
	   Board Exam Review for Cosmetology:
	   − Permanent Waving
		20

• perform basic sectioning, blocking and winding techniques	• **Process and Product** in which the student will: − perform techniques related to the physical process including:	
• demonstrate alternative sectioning, blocking and winding techniques	• basic technique/pattern • a minimum of two alternative techniques/patterns.	30 40

• identify and follow safe and sanitary practices	*Assessment Tool*
	   COSTAT1050: Permanent Waving 1 (The Physical Process)
	   COSSAT1050: Permanent Waving 1 (The Physical Process)	

• maintain records of processes used		
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Permanent Waving: History	*The student should:*
	• research and describe the major developments in permanent waving:
	  – equipment/tools
	  – chemicals
	• identify and describe permanent waving technology currently available.	

Permanent Waving: Processes	• identify and describe the major processes involved in permanent waving:
	  – physical process
	  – chemical process.	

Permanent Waving: Physical Process
 	
• Steps
	• identify and describe the steps in the physical process of permanently waving hair:
	  – sectioning
	  – blocking
	  – wrapping
	  – winding
	  – securing	

• Rods and Wraps	• identify shapes and sizes of conventional permanent waving rods • describe the uses and effects of rods with different shapes and sizes • demonstrate methods of securing conventional rods • describe purposes of permanent wave wraps	
• Sectioning	• part hair and secure each section to create a basic sectioning pattern • identify order in which sections should be blocked, wrapped and wound	
• Blocking	• part sections into blocks to correspond to the diameter and length of rods to be wound and in relation to hair length and density • hold hair perpendicular to the block	

COURSE COS1080:   THEATRICAL MAKEUP 1 (BASIC PRINCIPLES)

Level:	Introductory
Theme:	Special Effects/Services
Prerequisite:	COS1010 Personal Images
Description:	Students describe the purpose and scope of theatrical makeup, identify elements related to designing theatrical makeup, and use appropriate materials to perform basic theatrical makeup techniques.
Parameters:	Access to a theatrical makeup facility and supplies.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• describe the purpose and scope of theatrical makeup and describe the basic principles of colour and theatrical makeup	• **Concept Testing** in which the student will:
	  – given 30 test items relating to theatrical makeup, answer a minimum of 25 items correctly.
	
	Assessment Tool
	  Board Exam Review for Cosmetology:
	  – *Facial Makeup*
		25

• design, plan and create, in a safe and sanitary manner, basic theatrical makeup	• **Process and Product** in which the student will:
	  – design, plan and create a minimum of three basic theatrical makeups including:
	   • design
	   • plan
	   • execute.
	
	Assessment Tool
	  COSTAT1080: Theatrical Makeup 1 (Basic Principles)
		25
		25
		25

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Purpose of Theatrical Makeup	*The student should:*
	• identify and describe the purpose of theatrical makeup
	• analyze and describe the effect of theatrical makeup on:
	  − performers
	  − photographic images
	  − viewers.
		Consult with drama teacher, local theatrical performers and theatrical makeup artists.

Basic Principles
 	
• Anatomy and Physiology
 	
• Light and Shade
 	
• Characteristics of Colour
	• relate knowledge of human anatomy and physiology to the design and use of theatrical makeup
	
	• identify and locate major bones of the head and face
	
	• identify and locate major bones of the arm and hand
	
	• describe the effect of light and shade in creating/changing images
	
	• describe methods that use the principle of light and shade to create/change images
	
	• demonstrate the use of the light and shade principle to:
	  − create a new image
	  − change an image
	
	• identify primary, secondary, tertiary and complementary colours and their relationship on a colour wheel
	
	• define and describe the following characteristics of colour:
	  − pigment
	  − tints
	  − hue
	  − tones
	  − intensity
	  − shades
	  − value
	
	• describe the relationship between colour characteristics	

COURSE COS2020: HAIR & SCALP CARE 2

Level:	Intermediate
Theme:	Hair and Scalp Care
Prerequisites:	COS1030 Hair & Scalp Care 1 COS1010 Personal Images
Description:	Students analyze the histology and condition of hair and the relationship of hair to the scalp, and select and use appropriate hair and scalp cleansing and conditioning products.
Parameters:	Access to a professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• describe the relationships among:
  – hair condition
  – scalp condition
  – safe and sanitary hair care practices
	• **Concept Testing** in which the student will:
	  – given 40 questions relating to hair and scalp care, answer a minimum of 30 questions correctly.
	Assessment Tool
	  Board Exam Review for Cosmetology:
	    – *Shampooing, Rinsing and Conditioning*
	    – *Properties of Hair and Scalp*
		15

• identify and describe the purpose and application of various hair and scalp care products and technologies	• **Applied Problem Solving** in which the student will:
	  – present a written, verbal, graphic or other description of hair and scalp care products and technologies, and their uses.
	Assessment Tool
	  CTS Rubric Presentation/Reports
		20

• perform hair and scalp care services including client analysis and preparation, hair and scalp analysis, product and technology selection, shampooing and conditioning	• **Process and Production** in which the student will:
	  – perform a variety of hair and scalp care services, including:
	    • six hair care services
	    • six scalp care services.
	Assessment Tool
	  COSTAT2020: Hair & Scalp Care 2
		35
		30

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Histology	*The student should:*
	• analyze and describe the histology of different types of hair and heads of hair
	• define and describe factors that identify the condition of hair including:
	  – elasticity
	  – porosity
	  – texture
	  – density
	  – colour
	• identify and describe the effect of other skin tissues that surround the hair and hair follicles and affect hair growth.	

Hair and Scalp Relationships	• describe the relationship between the hair and the scalp • describe the process of keratinization as it affects both the hair and the scalp • propose effects of caring/not caring for the hair and scalp and the effects of caring for one without caring for the other.	
Hair and Scalp Cleansing Products	• identify and describe the advantages/disadvantages of different hair and scalp cleansing products • describe the action of different cleansing products on the hair and scalp • match cleansing products to the needs of different hair and scalp conditions.	
Hair and Scalp Conditioning Products and Technologies	• identify and describe the advantages/disadvantages of different types of hair and scalp conditioning products • describe the action of different conditioning products and technologies on the hair and scalp • match conditioning products and technologies to the needs of different hair and scalp conditions.	

COURSE COS2030: FORMING & FINISHING 2

Level:	Intermediate
Theme:	Hair and Scalp Care
Prerequisites:	COS1040 Forming & Finishing 1
	COS1010 Personal Images
Description:	Students analyze head and facial features, determine suitable hairstyles, and form and finish hairstyles.
Parameters:	Access to a professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• form hair by shaping, constructing and securing a variety of pin curls
 	
 • finish hair by combing out constructed and dried pin curls
	• **Concept Testing** in which the student will:
	 – present a written, verbal, graphic or other description of factors to be considered when selecting a hairstyle and the forming and finishing techniques needed to create the hairstyle.
	
	 Assessment Tool
	 Board Exam Review for Cosmetology:
	    – *Finger Waving*
	    – *Wet Hairstyling*
	    – *Thermal Hairstyling*
		15

• identify, describe and analyze factors that affect the selection of a hairstyle and the forming and finishing techniques suited to achieving the selected hairstyle
 	
 • wave and curl hair using a combination of forming and finishing techniques including:
    – pin curling
    – roller setting
    – iron setting
    – finger waving
    – blow waving/styling
	• **Process and Product** in which the student will:
	 – follow the teacher's directions to form and finish a minimum of two heads of hair that have been formed using pin curls and/or rollers
	 – analyze client's needs and perform a minimum of three combinations of forming and finishing techniques.
	
	 Assessment Tool
	 COSTAT2030: Forming & Finishing 2
		40
		
		 45

COURSE CS2030: FORMING AND FINISHING 2 (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
• demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	• **Observations** of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	    Basic Competencies Reference Guide and any
	      assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes
	The student should:	

Pin Curling
 	
• Types
	• identify and describe types of pin curls; e.g.:
	   – sculpture
	   – stand-up/cascade
	   – skip waves
	   – barrel	

• Purpose	• describe the purpose of each type of pin curl • describe the advantages/disadvantages of using pin curls	

• Parts	• describe the different parts of a pin curl:
	   – base
	   – stem
	   – circle	

• Techniques	• describe the effects of various pin curling techniques including using:
	   – base shapes
	   – long-stem, half-stem, no-stem pin curls
	   – different sized circles
	   – clockwise/counterclockwise	

• Fastening	• use clips or other fasteners to properly secure each type of pin curl
	
	• form pin curls on various parts of the scalp; e.g.:
	   – side
	   – front
	   – crown
	   – back
	   – nape
	
	• create a variety of partial and whole head effects using pin curls	

COURSE COS2040: HAIRCUTTING 1

Level: Intermediate

Theme: Haircutting

Prerequisites: COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students demonstrate safe handling of haircutting and hairthinning tools, and describe and demonstrate basic cutting methods.

Parameters: Access to a professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• define and describe terms related to professional haircutting and explain why professional haircutting is the foundation for hairstyling, other hair services and a feature of personal grooming	• **Concept Testing** in which the student will:
	– given 30 test items relating to haircutting, respond correctly to a minimum of 20 items.
	
	Assessment Tool
	  Board Exam Review for Cosmetology:
	   – Haircutting
		20

• describe and demonstrate safe handling of haircutting and hairthinning tools	• **Process and Product** in which the student will: – handle haircutting and hairthinning tools safely and in a sanitary manner.	30

• interpret and follow cutting patterns to:
  – section
  – cut
  – follow guidelines
  – section and cut hair to predetermined shapes, lengths and styles
	– follow cutting patterns and use a variety of haircutting/thinning tools to create two blunt and two layer cuts.
	
	Assessment Tool
	  COSTAT2040: Haircutting 1
	  COSSAT2040: Haircutting 1
		50

COURSE CS2040: HAIRCUTTING 1 (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Principles and Practices of Haircutting	*The student should:*
	
	• explain the purpose and basic principles of haircutting and hairthinning
	
	• identify and describe types of haircuts/cutting techniques including:
	    − blunt
	    − taper
	    − layer
	    − shingle
	
	• explain and describe the principle of elevation as it applies to haircutting
	
	• describe and demonstrate haircutting sanitation and safety practices.	

Implements	• identify and describe implements used to cut and thin hair; e.g.,
	    − shears (cutting, thinning)
	    − razors (replaceable blade, straight)
	    − clippers
	
	• demonstrate proper handling, use and maintenance of each cutting implement including:
	    − in-use positions
	    − at-rest positions
	    − holding cutting implement and comb together.	

COURSE COS2050: HAIR CARE & CUTTING 1 (CLIENT SERVICES)

Level:	Intermediate
Theme:	Haircutting
Prerequisites:	COS2040 Haircutting 1
	COS1040 Forming & Finishing 1
	COS1030 Hair & Scalp Care 1
`	COS1010 Personal Images
Description:	Students analyze a client's need for hair and scalp care and perform the necessary services.
Parameters:	Access to a professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• meet, greet and make a client feel welcome and comfortable, and prepare the client for selected services	• **Process** in which the student will: – perform client orientation, preparation, analysis and consultation procedures to standards indicated on a client services performance chart.	50
• consult with and analyze a client's needs for hair and scalp care and haircutting services, and recommend suitable services		
• perform hair and scalp care and haircutting services agreed to by a client in a safe and sanitary manner, and record information on services performed	• **Product** in which the student will: – perform a variety of client services to a minimum of six clients' satisfaction.	50
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* 　*Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting client with coats, hats and personal belongings • direct and assist client to be seated at work area • describe client's need for hairstyling services • consult with client to determine required services.	
Client Preparation	• analyze client's hair and scalp • recommend hairstyling services and hairstyle based on analysis • advise client of cost of each service • drape client for wet/dry service • remove hair ornaments, if present • request client to remove facial adornments, if necessary, and have client put them in safe place • brush hair thoroughly (before and after analysis) as needed • establish a data base (e.g., record card) for each client • complete record card for each service provided.	
Client Services • Shampooing	• check that client is properly draped for a wet service • direct and assist client to the shampoo area • position client and ensure client's neck is placed properly on shampoo sink • ensure that cape and towel(s) are appropriately positioned to protect client's clothing • select a shampoo appropriate to condition of the hair and scalp • perform a complete shampoo	

COURSE COS2060:   PERMANENT WAVING 2 (COLD WAVING)

Level:	Intermediate
Theme:	Chemical Services: Permanent Waving
Prerequisites:	COS1050 Permanent Waving 1 (The Physical Process) COS1010 Personal Images
Description:	Students identify types of chemicals used to permanently wave hair and the relationship between the chemical process and the physical process. Students also analyze hair and combine the two processes to perform complete cold waves.
Parameters:	Access to a professional hairstyling facility. **Note**: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• distinguish between techniques used to curl hair temporarily and permanently; describe the chemistry of cold waving, and the effects of cold waving chemicals on the hair and scalp	• **Concept Testing** in which the student will:
	 – given 30 test items relating to cold waving, respond correctly to a minimum of 25 items.
	 – determine pH of acid and alkaline permanent waving solution
	 – describe effects of different pH levels on the hair and scalp.
	
	Assessment Tool
	    Board Exam Review for Cosmetology:
	    – *Permanent Waving*
		25
		
		15
		
		20

COURSE CS2060: PERMANENT WAVING 2 (COLD WAVING) (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• prepare and protect the client, self and others and perform basic physical and chemical cold waving processes in a safe and sanitary manner, and maintain records of materials used and results attained	• **Process and Product** in which the student will: – prepare clients, analyze hair and scalp and perform one or more basic cold waves, including: • personal and workstation preparation • client preparation • hair and scalp analysis • wrap and process cold waves. *Assessment Tool* COSTAT2060: *Permanent Waving 2 (Cold Waving)* COSSAT2060: *Permanent Waving 2 (Cold Waving)*	40
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Permanent Waving Techniques	*The student should:* • define and describe the term permanent waving • identify techniques used to permanently wave hair • distinguish between cold waving and heat waving • identify and describe similarities among permanent waving techniques.	

COURSE COS2070: PERMANENT WAVING 3 (HEAT-ASSISTED)

Level:	Intermediate
Theme:	Chemical Services: Permanent Waving
Prerequisites:	COS1050 Permanent Waving I (The Physical Process) COS1010 Personal Images
Description:	Students use appropriate physical and chemical processes and products to perform heat-assisted permanent waves, and analyze the quality of the waves.
Parameters:	Access to a professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
• distinguish between:
  – procedures, technologies and effects of heat-assisted and cold permanent waving on the hair and scalp
  – technology and techniques used in heat-assisted waving and cold waving
	Assessment of student achievement should be based on:
	
	• **Concept Testing** in which the student will:
	  – given 25 test items relating to heat-assisted permanent waving, respond correctly to a minimum of 20 items.
	
	Assessment Tool
	  Board Exam Review for Cosmetology:
	  – *Permanent Waving*
		20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• section, block, wrap, wind and process hair, using available heat-assisted waving techniques, and protect the health and safety of a client, self and others	• **Process and Product** in which the student will:
	  – perform one or more heat-assisted permanent waves:
	    • section
	    • block
	    • wrap
	    • wind
	    • lotion application
	    • process check
	    • neutralize
	    • finish.
	
	Assessment Tool
	  COSTAT2070: Permanent Waving 3 (Heat-assisted)
		5
		5
		10
		20
		5
		10
		15
		10

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Heat-assisted Permanent Waving Processes	*The student should:* • define the terms heat-assisted permanent waving and exothermic waving • describe the advantages/disadvantages of heat waving • compare heat-assisted waving with cold waving.	
Origin and Development	• identify and describe the origin of heat-assisted waving • describe the historical and contemporary use of heat-assisted permanent waving and machineless methods of permanent waving.	

COURSE COS2080:   PERMANENT WAVING 4 (CLIENT SERVICES)

Level: Intermediate

Theme: Chemical Services: Permanent Waving

Prerequisites: COS2070 Permanent Waving 3 (Heat-assisted)
                      COS2060 Permanent Waving 2 (Cold Waving)
                      COS1050 Permanent Waving 1 (The Physical Process)
                      COS1010 Personal Images

Description: Students analyze the condition of hair, identify and describe available types of permanent waves, and recommend and perform permanent waving services appropriate to the client's needs and wants.

Parameters: Access to a professional hairstyling facility.

                     Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• meet, greet, welcome and orient a client to available permanent waving services	• **Process** in which the student will: – perform client orientation, preparation, analysis and consultation procedures to standard indicated on a client services performance chart:	

• consult with and analyze a client's needs, hair and scalp condition and suitability for permanent waving services, and recommend suitable services	• orientation
	    • preparation
	    • analysis
	    • consultation/recommendation.
		10
		 5
		 5
		 10

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• perform permanent waving services agreed to by a client in a safe and sanitary manner, and record information or services performed	• **Product** in which the student will:
	  – perform permanent waving and related services, including:
	    • sectioning
	    • blocking
	    • wrapping
	    • winding
	    • applying lotion
	    • checking process
	    • neutralizing
	    • finishing.
	
	Assessment Tool
	    COSTAT2080: Permanent Waving 4 (Client Services)
		5
		10
		5
		20
		5
		10
		10
		5

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting client with coats, hats and personal belongings • direct and assist client to be seated at work area • discuss client's needs and wants for permanent waving.	
Keeping Records	• establish a data base (e.g., record card) for each client • record details of sectioning pattern, rods and products used and quality and degree of curl achieved when service is completed.	

COURSE COS2090: COLOURING 1

Level:	Intermediate
Theme:	Chemical Services: Haircolouring
Prerequisites:	COS1030 Hair & Scalp Care 1 COS1010 Personal Images
Description:	Students describe the basic principles of colour and haircolouring, describe and perform patch/predisposition and strand tests, and prepare and apply temporary and semipermanent haircolours.
Parameters:	Access to a professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• describe and explain principles and practices of colouring hair; identify and describe the different types of haircolouring agents, their chemistry and effects on the hair and scalp	• **Concept Testing** in which the student will: – given 50 test items relating to temporary and semipermanent haircolouring, respond correctly to a minimum of 40 items. *Assessment Tool* *Board Exam Review for Cosmetology:* *– Haircolouring*	20
• analyze hair and scalp; determine their suitability for different types of haircolouring; perform safe and sanitary, temporary and semipermanent haircolouring practices	• **Process and Product** in which the student will: – perform hair and scalp analysis and predisposition tests; perform a minimum of three temporary and three semipermanent haircolouring procedures, including: • analyses • predisposition tests (skin/patch) • strand test • temporary colour applications • semipermanent colour processes. *Assessment Tool* *COSTAT2090: Colouring 1* *COSSAT2090: Colouring 1*	 20 20 10 15 15
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any* * assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Haircolouring: Definition and Purpose	*The student should:* • define the term haircolouring • identify and describe the reasons for colouring hair • describe potential haircolouring clientele.	
Principles of Colour and Haircolouring	• describe the relationship between light and colour • describe the colour spectrum and its relationship to haircolouring • identify and describe the relationships among primary, secondary, tertiary and complementary colours • define related terms (e.g., tone, shade, level, virgin hair) • distinguish between adding colour to hair and removing colour from hair.	Have students produce and explain a colour wheel.

Types of Haircolouring	• identify and distinguish among forms of haircolouring:
	  – temporary
	  – semipermanent
	  – permanent
	• list examples of colouring agents for each form of haircolour
	• describe and distinguish among the action and effect of each form of haircolouring on the scalp and on different types and colours of hair.	

Chemistry of Colouring Agents	• identify and describe the chemistry and active ingredients of haircolouring agents • explain the advantages/disadvantages of different types of haircolouring agents used as temporary/semipermanent forms of haircolour • describe the use of aniline derivative colouring agents.	

COURSE COS2100: COLOUR REMOVAL 1

Level: Intermediate

Theme: Chemical Services: Haircolouring

Prerequisites: COS2090 Colouring 1
                    COS1030 Hair & Scalp Care 1
                    COS1010 Personal Images

Description: Students describe the basic principles of colour removal, levels of colour, colour
                    removal chemicals and application procedures, and prepare and apply a variety of
                    products to remove natural and artificial haircolour.

Parameters: Access to a professional hairstyling facility.

                    Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• define terms and explain practices related to removal of colour from hair, and explain the chemistry and action of hydrogen peroxide in the highlighting and colour removal process	• **Concept Testing** in which the student will: – given 30 test items relating to colour removal, respond correctly to a minimum of 25 items. *Assessment Tool* *Board Exam Review for Cosmetology:* – *Haircolouring*	30
• analyze hair and scalp, determine suitability for a colour removal procedure, prepare, apply and process selected colour removal agents, and follow safe and sanitary practices	• **Process and Product** in which the student will: – perform hair and scalp analyses and predisposition tests as necessary; perform a minimum of four selected colour removal procedures, including: • hair and scalp analyses • predisposition tests • colour removal procedures • finish. *Assessment Tool* *COSTAT2100: Colour Removal 1* *COSSAT2100: Colour Removal 1*	10 10 40 10
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Principles, Products and Practices	*The student should:*
	
	• define the terms colour removal, bleaching and colour reduction
	
	• identify colour removal products/agents
	
	• describe the uses, advantages/disadvantages of available colour removal products
	
	• describe the principle of colour removal levels
	
	• describe the meaning of related terms; e.g.:
	  – pigment
	  – tone
	  – shade
	  – hue
	
	• distinguish among colour addition, colour reduction and colour removal processes
	
	• distinguish between the use of hair lighteners as single-process colouring agents and their use as a part of the double process.	

Chemistry of Colour Removal	• distinguish between products used to remove natural colour from hair and artificial haircolouring • identify and describe the major chemicals used to remove natural and artificial colour from hair • describe the action of hydrogen peroxide in colour removal processes • describe the action of hair lighteners on the hair and scalp.	
Hair and Scalp Analysis	• explain how colour removal agents may damage the hair and damage or irritate the scalp • identify and describe factors that may prohibit the application of bleaches or colour reducing agents • analyze hair and scalp to determine their suitability for applications of colour removal agents or bleaches.	

COURSE COS2110: COLOURING & REMOVAL 1 (CLIENT SERVICES)

Level: Intermediate

Theme: Chemical Services: Haircolouring

Prerequisites: COS2100 Colour Removal 1
COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the condition of a client's hair and scalp, and prepare for and perform colouring and colour removal services.

Parameters: Access to a professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• meet, greet, welcome and orient a client to haircolouring and colour removal services	• **Process** in which the student will: – perform a minimum of four client orientation and preparation procedures to standards indicated on a client services performance chart	20
• consult with and analyze a client's needs, hair and scalp condition and suitability for haircolouring or colour removal services, and recommend suitable services	– perform a minimum of four client consultation and client analysis procedures and recommend services.	30
• perform colouring or decolouring services agreed to by a client in a safe and sanitary manner, and record information on services performed and chemicals used	• **Product** in which the student will: – perform a minimum of two colouring and two colour removal services. *Assessment Tool* *COSTAT2110: Colour and Removal 1 (Client Services)*	50
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • direct and assist client to be seated at work area • identify and describe client's needs and wants for haircolouring services.	
Client Preparation	• analyze client's hair and scalp; assess suitability for colouring, colour removal services • identify suitable alternatives and recommend haircolouring and other services based on analysis • consult client and determine preferred style and desired colour service • advise client of cost of each service • drape client for wet/dry service • remove hair ornaments, if present • request client to remove facial adornments, if necessary, and have client put them in safe place • prepare hair (e.g., brush, section, cover), as necessary.	
Patch/Predisposition Test	• perform a skin test 24 to 48 hours before intended date of colour application (if an aniline derivative colouring agent is to be used) • check the effects of the patch test; proceed if a positive reaction is not indicated; i.e., no adverse effect on skin is indicated.	
Equipment, Material Preparation	• prepare the work area for specific haircolouring service • access and arrange all items required.	

COURSE COS2120: FACIALS & MAKEUP 1

Level: Intermediate

Theme: Skin Care

Prerequisites: COS1060 Skin Care 1 (Basic Practices)
COS1010 Personal Images

Description: Students describe the anatomy, physiology and histology of the skin and the effect of pathogenic organisms on the body. Students also analyze facial shapes and conditions, and perform facial care and corrective makeup techniques.

Parameters: Access to a professional esthetology facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• relate knowledge about bacteriology and human anatomy, physiology and histology to the service and practice of cosmetology	• **Concept Testing** in which the student will: – given 40 questions relating to skin care, answer a minimum of 30 questions correctly. *Assessment Tool* *Board Exam Review for Cosmetology:* – *Facials* – *Facials and Makeup*	30
• analyze facial shapes, features and conditions; identify and describe conditions that may/may not be treated by a cosmetologist	• **Process and Product** in which the student will: – perform a minimum of three facial analyses and be able to identify and describe treatable and non-treatable skin conditions – perform a minimum of three facial and makeup procedures.	40 30
• perform basic facial care and corrective makeup services in a safe and sanitary manner	*Assessment Tool* *COSTAT2120: Facials & Makeup 1* *COSSAT2120: Facials & Makeup 1*	
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Anatomy, Physiology, Histology	*The student should:* • define the terms cell, tissue, organ and system, and explain the relationship among them • identify and describe systems of the human body and explain the relationship among them • explain why knowledge related to anatomy and physiology is important to professional cosmetologists.	
Bacteriology, Pathology and Sanitation	• define the terms bacteriology, pathogenic and non-pathogenic • identify and distinguish between pathogenic and non-pathogenic organisms (e.g., bacteria, viruses, fungi) • identify and describe types of pathogenic bacteria and explain their growth, reproduction and effect on body health • describe personal and public hygiene practices taken to control the spread of infections and diseases • demonstrate practices used in cosmetology to control the spread of infections and diseases in the workplace.	
Facial Conditions, Disorders, Analysis	• identify and distinguish among lesions of the skin • analyze the face to determine condition of the skin • describe and identify conditions and disorders of the face • identify the conditions and disorders that may be treated/should not be treated by a professional cosmetologist.	

COURSE COS2130:   FACIALS & MAKEUP 2 (CLIENT SERVICES)

Level:	Intermediate
Theme:	Skin Care
Prerequisites:	COS2120 Facials & Makeup 1 COS1060 Skin Care 1 (Basic Practices) COS1010 Personal Images
Description:	Students consult with and analyze a client's skin care needs, and perform a variety of facial services, including surface cleansing and corrective makeup techniques.
Parameters:	Access to a professional esthetology facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• meet, greet, welcome and orient client to facials and makeup services	• **Process and Product** in which the student will:
	  – perform a minimum of three client orientation and preparation procedures
	  – perform a minimum of three client services relating to facial care and makeup.
		30
		
		70

• consult with and analyze a client's needs for facial and makeup services, and perform facials and basic and corrective makeup services in a safe and sanitary manner	*Assessment Tool* *COSTAT2130: Facials & Makeup 2 (Client Services)*	
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • identify client's needs and wants for facial care services.	

Client Preparation and Analysis	• prepare client for facial care services:
	  – gowning/draping
	  – head draping
	  – removing adornments
	• analyze client's facial shape, features and skin condition
	• consult with client to determine:
	  – preferred facial stylings and colourings
	  – presence of skin allergies or special skin conditions
	  – scope of services preferred
	• recommend facial care services, special products and related services
	• advise client of cost of each service
	• obtain client's consent before performing facial services.	

Equipment, Materials, Implements	• assemble all necessary equipment, materials and implements • prepare the work area for facial care services.	

Performing Facial Care Services	• perform facial care procedures to include:
	  – surface cleansing
	  – deep cleansing
	  – toning, manual massage manipulations
	  – nourishing
	  – protecting
	• design and create daytime makeup stylings	

COURSE COS2140:   SKIN CARE 2 (CLIENT SERVICES)

Level:	Intermediate
Theme:	Skin Care
Prerequisites:	COS1060 Skin Care 1 (Basic Practices) COS1010 Personal Images
Description:	Students consult with and analyze the client's skin care needs, and recommend and perform client-approved services, including cleansing, toning (manual and electrical massage), nourishing and protecting.
Parameters:	Access to a professional esthetology facility and use of current skin care technology.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• meet, greet, welcome and orient a client to available skin care services including available skin care technology	• **Process and Product** in which the student will: – perform a minimum of three client orientation and preparation procedures – perform a minimum of three client services related to skin care including the use of available technology. *Assessment Tool* *COSTAT2140: Skin Care 1 (Client Services)*	30 70
• consult with and analyze a client's skin care condition and needs, recommend appropriate services and technology-based treatments, and perform skin care services and treatments in a safe and sanitary manner		
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Skin Care Technology	*The student should:* • describe the basic principles of electricity and electrical safety related to skin care technology • describe the purpose and demonstrate the safe and sanitary use of: – skin analysis technology – surface and deep cleansing technology – toning technology – nourishing technology • sanitize and check the safety of each item of technology after use.	
Client Orientation	• greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • direct and assist client to be seated at consultation area.	
Client Consultation and Analysis	• consult with clients to determine their skin care needs and wants • advise clients of the scope of skin care services including technology available and the purpose of each service • analyze client's skin and recommend services for treatable conditions • advise clients of the advantages/disadvantages of treating/not treating skin conditions • advise client of cost of each skin care service • obtain client's consent before performing skin care services.	
Equipment, Materials and Implements	• assemble all necessary equipment, materials and implements • prepare the work area for skin care services.	

COURSE COS2150:   MANICURING 2

Level: Intermediate

Theme: Nail Care

Prerequisites: COS1070 Manicuring 1
                    COS1010 Personal Images

Description: Students describe the anatomy of the arm and hand, identify diseases and
                    disorders of the hands and nails and hand and nail conditions that may be treated
                    by a manicurist, and recommend and perform services for treatable conditions.

Parameters: Access to a professional esthetology facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• recognize conditions, disorders and diseases of the hands and nails, describe conditions and disorders that may be treated by a manicurist, and suggest treatments for each condition or disorder	• **Concept Testing** in which the student will: – given 30 test items relating to manicuring, respond correctly to a minimum of 25 items. *Assessment Tool* *Board Exam Review for Cosmetology:* – *Manicuring and Pedicuring* – *The Nail and Its Disorders*	25
• analyze treatable hand and nail conditions, perform a variety of manicuring services including plain and oil manicures, and hand and arm massage	• **Process and Product** in which the student will: – analyze a minimum of three hands and nails select and perform suitable manicuring services. *Assessment Tool* *COSTAT2150: Manicuring 2* *COSSAT2150: Manicuring 2*	75
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Anatomy and Physiology	*The student should:* • identify and describe the basic structure of the arm and hand • explain the relationships among the various parts of nails and their surrounding tissues • describe how nails grow • describe the major muscles, nerves and bones that control/coordinate the workings of the shoulders, arms and hands.	
Hand and Nail Disorders and Diseases	• explain how manicure-related muscles, nerves, bones and other tissues may be affected by: – disease – improper care – diet – chemicals • identify the technical terms used to describe specific nail disorders and diseases • list and describe disorders that may be treated by a cosmetologist/manicurist • describe services that may be used to treat nail and nail-related disorders.	
Equipment, Cosmetics and Implements	• identify equipment, manicure cosmetics and implements required to perform manicure services including: – plain manicures – oil manicures – electric manicures • describe materials required to perform hand and arm massage.	

COURSE COS2160: NAIL ART

Level:	Intermediate
Theme:	Nail Care
Prerequisites:	COS1070 Manicuring 1 COS1010 Personal Images
Description:	Students describe nail art techniques used to enhance the appearance of fingernails, as well as design and produce simple nail art.
Parameters:	Access to a professional esthetology facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• define and describe nail art, and identify and describe materials and cosmetics available to create various nail art procedures and create basic nail art designs	• **Concept Testing** in which the student will: – present a report defining and describing nail art and the procedures used to perform basic nail art. *Assessment Tool* *CTS Rubric: Presentation/Reports*	10
• design a variety of nail art images using appropriate nail art materials and cosmetics	• **Process and Product** in which the student will: – design and create a minimum of three nail art designs suited to finger and nail shapes. *Assessment Tool* *COSTAT2160: Nail Art*	90
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Principles and Practices	*The student should:* • define the term nail art • describe the relationship between nail art and basic hand and nail care • explain when and why nail art may be worn	

COURSE COS2160: NAIL ART (continued)

Concept	Specific Outcomes	Notes
Principles and Practices (continued)	*The student should:* • identify and describe nail art services including the following techniques: − creative polishing (e.g., French manicure) − nail painting − applications (e.g., tape, gems, feathers, gold leaf) • explain why nail art should be performed on hands and nails that are properly manicured.	
Nail Art Materials and Cosmetics	• identify and describe equipment, materials and cosmetics that may be used in nail art services • explain the advantages/disadvantages of using different nail art materials and cosmetics.	
Designing Nail Art	• identify and describe factors that help determine suitable nail art • identify the principles of design that may be used to design nail art.	
Nail Art Procedures	• list and describe the procedures used to design and create various nail art effects including: − French manicure − nail painting, marbling, striping − tape, gem, feather, foil applications − combination effects • demonstrate the use of technology (e.g., air brush) to create nail art • describe and demonstrate how nail art can be used to coordinate with other adornments worn by clients • describe and demonstrate how nail art may be protected.	
Safety and Sanitation	• identify and follow safe and sanitary practices related to performing nail art • maintain a clean, safe work area • sanitize and return items to their proper storage areas after use • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS2170: MANICURING 3 (CLIENT SERVICES)

Level:	Intermediate
Theme:	Nail Care
Prerequisites:	COS2150 Manicuring 2
	COS1070 Manicuring 1
	COS1010 Personal Images
Description:	Students analyze hands and nails to determine manicure needs and the presence of treatable and nontreatable conditions, as well as select and perform appropriate manicure and related services.
Parameters:	Access to a professional esthetology facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 • meet, greet and orient a client to available manicure services
 	
 • consult with and analyze a client's hands, nails and manicure needs, and perform services in a safe and sanitary manner
 • demonstrate basic competencies.
	Assessment of student achievement should be based on:
	 • **Process and Product** in which the student will:
	 – perform a minimum of three client orientation and preparation procedures to standards indicated on a client services performance chart.
	 – perform a minimum of three client services related to manicure.
	
	 Assessment Tool
	      COS2170: Manicuring 3 (Client Services)
	
	 • **Observations** of individual effort and interpersonal interaction during the learning process.
	
	 Assessment Tool
	      Basic Competencies Reference Guide and any assessment tools noted above
		
		30
		
		70
		
		Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • direct and assist client to be seated at work area • discuss client's preferred nail services.	

Concept	Specific Outcomes	Notes
Client Consultation and Analysis	*The student should:* • analyze client's hands and nails and assess their suitability for nail art services • identify alternative services and recommend specific nail art and related services based on analysis • consult with client to determine preferred services and nail art design • advise client of cost of each service • ask client to remove rings and other hand adornments and have client put them in a safe place • perform basic manicure procedures, if necessary, to prepare nail(s) for nail art applications.	
Equipment, Cosmetics and Implements Preparation	• prepare the work area for client-approved service(s) • access and arrange all items required for the service(s).	

Performing Nail Art Services	• perform manicure and related services including:
	  – plain manicures
	  – oil manicures
	  – hand and arm massage
	  – nail art
	• use available technology to perform manicure, massage and nail art services
	• advise clients how they may maintain the groomed appearance of their hands, nails and nail art.	

Keeping Records	• establish a data base (e.g., record card) for each manicure and related service client • update the data base after completing each manicure-related service.	
Safety and Sanitation	• identify and follow safe and sanitary manicure and related service practices • maintain a clean, safe work area • sanitize and return items to their proper storage areas after use • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS2180:   HAIRPIECES & EXTENSIONS

Level: Intermediate

Theme: Special Effects/Services

Prerequisite: COS1010 Personal Images

Description: Students describe the purpose of hairpieces and extensions and types of hair and fibres used in constructing hair goods, and analyze and service hair goods.

Parameters: Access to a hairstyling or hair goods facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• describe the uses of hair goods and distinguish among the types of hair and fibres used in constructing hair goods	• **Concept Testing** in which the student will: – given 40 test items relating to hair goods, respond correctly to a minimum of 30 items. *Assessment Tool* *Board Exam Review for Cosmetology:* *– The Artistry of Artificial Hair*	30
• analyze hair goods, perform appropriate cleansing, conditioning, forming and finishing procedures on hairpieces and extensions, and attach hairpieces and extensions	• **Process and Product** in which the student will: – service and attach a minimum of three hairpieces and extensions. *Assessment Tool* *COSTAT2180: Hairpieces & Extensions*	70
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

COURSE COS2180: HAIRPIECES & EXTENSIONS (continued)

Concept	Specific Outcomes	Notes

Uses of Hair Goods	*The student should:*
	• explain why hairpieces and extensions are worn
	• list factors that may influence the wearing of hair goods; e.g.:
	  − fashion
	  − fad
	  − trend
	  − hair loss
	• describe other commercial uses for hair goods.	

Types of Hairpieces and Extensions	• distinguish among different types of hairpieces, hair replacements, wefts and extensions; e.g.:
	  − wiglets
	  − toupees
	  − falls
	  − bandeaus
	  − cascades
	  − braids
	  − switches
	  − chignons
	  − crown curls
	• describe the advantages/disadvantages of each type of hairpiece and extension.	

Types of Hair and Fibre	• describe and distinguish among the different types of natural hair and synthetic fibres used to construct hairpieces and extensions; e.g.:
	  − human hair
	  − animal hair
	  − synthetic fibres
	• explain the advantages/disadvantages of each type of hair and fibre used to construct hair goods
	• analyze hair goods to identify hair or fibre content.	

COURSE COS2190: THEATRICAL MAKEUP 2 (PLANNING THE IMAGES)

Level:	Intermediate
Theme:	Special Effects/Services
Prerequisites:	COS1080 Theatrical Makeup 1 (Basic Principles) COS1010 Personal Images
Description:	Students design, select and apply makeup to create images of selected characters and to enhance personal appearances for theatrical purposes.
Parameters:	Access to a professional makeup studio or drama workshop.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• develop a plan to change physical images by applying design principles to the use of theatrical makeup	• **Process and Product** in which the student will: – develop a minimum of three theatrical makeup plans – execute a minimum of three theatrical makeup plans to standards indicated on a theatrical makeup performance chart.	50 50
• execute theatrical makeup plans to create, change and enhance physical images	*Assessment Tool* *COSTAT2190: Theatrical Makeup 2 (Planning the Images)*	
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Relationships between Basic Makeup Practices and Theatrical Makeup Practices	*The student should:* • describe theatrical makeup practices used to enhance or change images; e.g.: – hairstyling – corrective makeup – character makeup – adornments, prostheses • explain the relationship between basic cosmetology practices and theatrical makeup practices • distinguish between corrective makeup and character makeup • describe the purpose and identify examples of non-realistic makeup • explain the professional relationship between the performer and the theatrical makeup artist.	
Identifying Characters	• identify characters to be created in the context of a theatrical production or event • list features that may distinguish one theatrical character from others; e.g.: – body shape/structure – facial shape/features – haircolour/length/style – genetic characteristics – age – health – disfigurements – historical period • explain possible relationships between a theatrical character's personality and appearance.	
Designing Theatrical Makeup	• apply principles of design to prepare sketches, drawings and/or models to represent each character to be created • describe and identify factors that help determine the use of corrective or character makeup techniques	

COURSE COS2200: HISTORICAL COSMETOLOGY

Level: Intermediate

Theme: Enterprise and Competition

Prerequisite: COS1010 Personal Images

Description: Students, in addition to recreating historical hairstyles and facial images, describe the historical trends in hairstyles and makeup, and the relationship between historical changes in cosmetology to other changes in society.

Parameters: Access to a professional hairstyling/esthetology facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe: – historical, period-related trends in hair and makeup stylings – career options available to cosmetologists skilled in recreating historical hair and makeup stylings	• **Concept Testing** in which the student will: – given 40 test items relating to historical stylings, respond correctly to a minimum of 30 items.	30
• apply principles and practices of cosmetology and design to design and create historical hair and facial stylings	• **Applied Problem Solving** in which the student will: – design, plan and create a minimum of three historical hair and facial stylings. *Assessment Tool* *COSTAT2200: Historical Cosmetology*	70
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Historical Trends	*The student should:* • categorize major trends in personal appearance and grooming according to their historical occurrence • produce/develop a scrapbook, video, report or collage to show historical trends in hair and facial stylings • explain possible relationships between historical trends in fashions, hair and facial stylings and other changes in society during the same periods • describe possible relationships between hair and facial stylings and lifestyles • distinguish between the role of cosmetologists as creators of hair and makeup trends and as followers of trends created by others.	
Career Options	• explain career options available to cosmetologists skilled in recreating historical hair and facial stylings.	
Planning Historical Stylings	• identify historical images to be recreated • prepare worksheets to identify resources, required forming and finishing techniques needed to recreate the images.	
Creating Historical Stylings	• access and prepare resources needed to create a historical hair and facial styling • drape and prepare the client appropriately for each service • form and finish hair to recreate the historical hairstyle • perform facial services on client to recreate the historical facial styling.	
Safety and Sanitation	• demonstrate safe and sanitary practices • maintain a clean, safe work area • sanitize and return all items to proper storage areas • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS3010: PROFESSIONAL PRACTICES

Level:	Advanced
Theme:	Images and Practices
Prerequisite:	COS1010 Personal Images
Description:	Students describe the sectors of the cosmetology industry, as well as current and projected trends, needs, career opportunities, trade ethics and qualifications required for entry into each sector.
Parameters:	No specialized equipment or facilities.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify sectors of the cosmetology industry and the work performed in each sector • identify and describe the qualifications required for entry into each sector of the industry • identify and report on current and projected trends in the industry	• **Concept Testing** in which the student will: – prepare and present a report on the sectors of the cosmetology industry, qualifications required for entry into each sector and current and projected trends in the industry. *Assessment Tool* *CTS Rubric: Presentation/Reports* *Board Exam Review for Cosmetology:* *– The Salon Business*	40
• demonstrate ethical, interpersonal and communication skills suited to professional cosmetologists	• **Process and Product** in which the student will: – demonstrate interpersonal and communication skills. *Assessment Tool* *COSTAT3010: Professional Practices*	60
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

COURSE COS3010: PROFESSIONAL PRACTICES (continued)

Concept	Specific Outcomes	Notes
Sectors of the Cosmetology Industry	*The student should:* • analyze and describe sectors of the industry • list and describe the work performed in each sector.	
Current and Projected Trends	• survey local businesses related to the cosmetology industry and list and describe current and project trends • identify and describe factors that may have led to current trends • predict factors that may lead to projected trends.	

Career Opportunities	• for each sector of the cosmetology industry, list and describe:
	  – current career opportunities
	  – projected career opportunities
	  – entrepreneurial career opportunities.	

Entry-level Qualifications
 	
• Interpersonal and Communication Skills
 	
• Professional Ethics
	• for each sector of the cosmetology industry, list and describe qualifications/abilities required for entry
	
	• explain why effective interpersonal and communication skills are required by professional cosmetologists
	• describe and demonstrate interpersonal and communication skills required by professional cosmetologists
	
	• define the term professional ethics
	• list and describe ethical behaviours expected of professional cosmetologists
	• suggest possible consequences of ethical and unethical behaviour:
	  – consequences to individual cosmetologist
	  – consequences to the business operation
	  – consequences to the cosmetology industry
	• project future entry-level qualifications.	

COURSE COS3020: LONG HAIR GRAPHICS

Level:	Advanced
Theme:	Hair and Scalp Care
Prerequisites:	COS2010 Hair Graphics 2 COS1020 Hair Graphics 1 COS1010 Personal Images
Description:	Students design and produce symmetrical and asymmetrical hairstyles to create long hair graphics.
Parameters:	Access to professional hairstyling facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• select, design and create a variety of long hair graphics to suit different facial, personality and situational needs	• **Process and Product** in which the student will:
	– design and create a minimum of three long hair graphics to suit various client characteristics and needs, including:
	  • design
	  • execution
	  • finish.
	
	Assessment Tool
	  COSTAT3020: Long Hair Graphics
		30
		50
		20

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Designing Long Hair Graphics	*The student should:* • describe the advantages/disadvantages of wearing a long hair graphic • identify and describe factors that should be considered when designing long hair graphics • identify and describe devices that may be used to enhance and secure long hair graphics • list and describe a procedure used when designing and creating long hair graphics.	

Creating Long Hair Graphics	• demonstrate hair handling, brushing and combing techniques that protect the condition and appearance of long hair
	
	• create a variety of symmetrical and asymmetrical long hair graphics suited to:
	  – day wear
	  – bridal wear
	  – evening wear
	
	• incorporate a variety of devices to enhance the appearance (e.g., shape, volume, density) of selected long hair graphics
	
	• demonstrate a variety of techniques to secure and finish long hair graphics.	

Safety and Sanitation	• follow safe and sanitary practices • maintain a clean, safe work area • sanitize and return implements and materials to proper storage areas after use.	Review local and provincial health and safety regulations.

COURSE COS3030: HAIR & SCALP CARE 3

Level: Advanced

Theme: Hair and Scalp Care

Prerequisites: COS2020 Hair & Scalp Care 2
                    COS1030 Hair & Scalp Care 1
                    COS1010 Personal Images

Description: Students analyze the condition of the hair and scalp, make treatment decisions and recommendations, and clean and condition the hair and scalp, using available technology.

Parameters: Access to professional hairstyling facility.

                    Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• analyze the hair and scalp, and identify treatable and non-treatable conditions	• **Process and Product** in which the student will: – analyze a minimum of three heads of hair and identify treatable and non-treatable conditions	40
• make decisions and perform appropriate cleansing and conditioning treatments in a safe and sanitary manner	– perform three cleansing and three conditioning treatments appropriate to each client's needs including: • cleansing treatments • conditioning treatments. *Assessment Tool* *COSTAT3030: Hair and Scalp Care 3*	30 30
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Hair and Scalp Analysis	*The student should:* • analyze hair and scalps, and determine their conditions • determine conditions that may be treated by a cosmetologist • identify conditions that must not be treated by a cosmetologist and recommend courses of action.	
Treatments and Technologies	• select and prepare treatment products and application implements appropriate to the condition of the hair and scalp • select, check and prepare technologies necessary to support and/or enhance each treatment.	
Shampooing	• assist clients and prepare them for shampooing • perform complete shampoos including: – applying appropriate type and quantities of shampoo – distributing the shampoo – massaging the scalp – removing shampoo from the hair and scalp – protecting and assisting clients • following safe and sanitary shampoo practices.	
Conditioning	• assist and prepare clients for conditioning treatments • perform hair and scalp conditioning treatments (using surface conditioners and penetrating conditioners) including: – applying appropriate type and quantity of conditioner – ensuring proper distribution of conditioner – massaging the scalp, when necessary – using technology to support or enhance the treatment, where necessary – protecting and assisting the client.	
Safety and Sanitation	• follow safe and sanitary practices • maintain a safe, clean work area • sanitize and return technology and materials to proper storage areas after use • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS3040:   HAIR & SCALP CARE 4 (CLIENT SERVICES)

Level:	Advanced
Theme:	Hair and Scalp Care
Prerequisites:	COS2020 Hair & Scalp Care 2 COS1030 Hair & Scalp Care 1 COS1010 Personal Images
Description:	Students analyze a client's hair and scalp, make treatment decisions and recommend services, and perform client-approved hair and scalp care services to a client's satisfaction.
Parameters:	Access to professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• analyze hair and scalp, recommend treatment, promote the sale of related services, and perform client-approved hair and scalp care services to a client's satisfaction	• **Process and Product** in which the student will: – perform applied and related hair and scalp care services to a minimum of three clients.	60
• recommend and promote the sale of hair and scalp care products	– demonstrate ethical sales techniques while introducing and promoting the sale of hair and scalp care products. *Assessment Tool* *COSTAT3040: Hair & Scalp Care 4 (Client Services)*	40
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • direct and assist clients to be seated at work area • determine each client's needs for hairstyling services • provide clients with style photographs and magazines • consult with each client to determine required services.	
Client Preparation	• analyze each client's hair and scalp • recommend hairstyling services and hairstyle based on analysis and each client's needs • advise clients of cost of each service • drape clients for wet/dry services • remove hair ornaments, if present • request clients to remove facial adornments, if necessary, and have clients put them in a safe place • brush hair thoroughly (before and after analysis) as needed.	
Client Services • Shampooing	• direct and assist clients to the shampoo area • position clients and ensure that they are positioned properly at the shampoo sink • ensure that cape and towel(s) are appropriately positioned to protect each client's clothing • select and recommend a shampoo appropriate to condition of the hair and scalp • suggest to clients the availability of the recommended shampoo for sale and home use • perform complete shampoos • towel dry hair • wrap hair in towel and assist clients to return to setting area unless conditioning service has been requested	

COURSE COS3050:   HAIRCUTTING 2

Level:	Advanced
Theme:	Haircutting
Prerequisites:	COS2040 Haircutting 1 COS1040 Forming & Finishing 1 COS1030 Hair & Scalp Care 1 COS1010 Personal Images
Description:	Students demonstrate the ability to design and follow cutting patterns, and safely use haircutting and thinning shears, razors and electric clippers.
Parameters:	Access to professional hairstyling facility. **Note**: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• create a variety of cutting patterns/plans	• **Process** in which the student will: – design and create a minimum of three cutting plans to indicate hair lengths, elevations, guideline(s).	30

• follow cutting patterns, and apply principles of elevation to produce a variety of layered/ tapered haircuts by selecting and using cutting implements appropriate to the task	• **Product** in which the student will:
	  – using appropriate cutting implements and applying appropriate principles of elevation, produce a minimum of one each of the following:
	    • blunt cut
	    • layer cut
	    • clipper cut
	    • child's haircut.
	
	Assessment Tool
	   COSTAT3050: Haircutting 2
		70

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	   Basic Competencies Reference Guide and any
	     assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes

Implements	*The student should:*
	
	• identify and describe the advantages/ disadvantages of different haircutting implements, including:
	  − shears
	  − razors
	  − clippers
	
	• describe the uses of different models of haircutting implements; e.g.:
	  − long shears/short shears
	  − safety razors/open razors
	  − mechanical and electrical clippers
	  − adjustable clippers/replaceable head clippers
	
	• describe the uses of attachments and related terms for different haircutting implements; e.g.:
	  − finger rests
	  − safety guards
	  − strops/hones
	  − replaceable razor blades.	

Guidelines and Evaluations	• cut guidelines at various areas of head; e.g.:
	  − stationary guidelines
	  − moving guidelines
	
	• comb, hold and cut hair at selected angles/ elevations ranging from 0° to 90° and from 90° to 180°.	

Using Clippers	• demonstrate haircutting techniques using hair clippers, including:
	  − outlining (e.g., blocked, tapered, feathered)
	  − arching
	  − cutting length
	  − clipper-over-comb.	

COURSE COS3060:   HAIRCUTTING 3 (CLIENT SERVICES)

Level: Advanced

Theme: Haircutting

Prerequisites: COS3050 Haircutting 2
                    COS2040 Haircutting 1
                    COS1040 Forming & Finishing 1
                    COS1030 Hair & Scalp Care 1
                    COS1010 Personal Images

Description: Students analyze hair, scalp, face, haircuts and styles, recommend hairstyles, prepare clients and perform haircutting services.

Parameters: Access to a professional hairstyling facility.

                    Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• consult with a client and interpret haircutting needs	• **Process** in which the student will: – demonstrate consulting skills and the ability to interpret clients' haircutting needs by designing a haircutting pattern/plan.	40

• perform safe and sanitary haircutting services for adults and children to their satisfaction	• **Product** in which the student will:
	  – perform a minimum of three haircuts.
	
	Assessment Tool
	  COSTAT3060: Haircutting 3 (Client Services)
		60

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with hats, coats and personal belongings • remove hair ornaments, if present • drape clients (for wet service if hair is to be shampooed).	
Client Consultation	• demonstrate care, concern and tact when consulting with clients • interpret each client's needs and wants in relation to his or her haircut preferences • inform clients of care and maintenance needs of different haircutting styles.	
Client Analysis	• analyze each client's head shape, facial shape and hair and scalp conditions • recommend alternative haircutting styles based on the analysis and consultation • clearly identify each client's preferred haircutting style.	
Designing the Haircut	• design the haircut based on each client's preference; e.g.: – sketch a cutting pattern/diagram – indicate desired lengths of hair in each area of pattern – identify cutting implements needed – note special techniques to be used.	A computer-aided imaging/design program may be used, if available.
Client Preparation	• prepare each client's hair for cutting: – shampoo hair and scalp – condition hair and scalp (if required) • towel dry and comb the hair • redrape for cutting service.	

COURSE COS3070: HAIR CARE & CUTTING 2 (CLIENT SERVICES)

Level: Advanced

Theme: Haircutting

Prerequisites: COS3060 Haircutting 3 (Client Services)
COS3050 Haircutting 2
COS3040 Hair & Scalp Care 4 (Client Services)
COS2040 Haircutting 1
COS2020 Hair & Scalp Care 2
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students consult with the client to determine services desired, analyze a client's hair and scalp, face and facial features, and recommend and perform client-approved services and treatments to create finished hairstyles.

Parameters: Access to a professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• present a confident and professional appearance and manner when analyzing and meeting a client's needs and promoting the sale of appropriate services and products	• **Process** in which the student will: – demonstrate professional level competencies when greeting, seating, consulting with clients, analyzing their needs and promoting the sale of appropriate services.	30

• perform a variety of safe and sanitary hair and scalp care and haircutting services agreed to by a client	• **Product** in which the student will:
	– perform a minimum of three integrated hair care, scalp care and haircutting services, including:
	  • hair and scalp care services
	  • haircutting services.
	
	Assessment Tool
	  COSPRAC–3 Practical Experiences: Checklist for Student Performance (Advanced Level)
		20
		50

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
• demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	• **Observations** of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	   Basic Competencies Reference Guide and any
	   assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • develop a plan to improve client orientation procedures • communicate, verbally and non-verbally, to clients that their needs and comfort are primary concerns of the salon/shop management and staff.	

Client Consultation	• identify and use innovative strategies to improve client consultation process; e.g.:
	  – computer-assisted consultations
	  – video and other media resources
	
	• communicate with clients to determine each client's hairstyling needs, wants and desires:
	  – analyze head and facial shapes
	  – analyze hair and scalp conditions
	  – ascertain lifestyles
	  – identify desired image projections
	  – "read" body language
	
	• determine preferred hairstyles
	
	• recommend hair care and haircutting services to achieve preferred hairstyle
	
	• provide clients with cost of each service/total cost, upon request
	
	• reach agreement with client on services to be performed.	

COURSE COS3080: PERMANENT WAVING 5 (DESIGNER)

Level: Advanced

Theme: Chemical Services: Permanent Waving

Prerequisites: COS2080 Permanent Waving 4 (Client Services)
COS2070 Permanent Waving 3 (Heat-assisted)
COS2060 Permanent Waving 2 (Cold Waving)
COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students identify and describe designer techniques, processes and implements used to permanently wave hair, complete a chemical process for each designer technique, and describe the advantages and disadvantages of each technique.

Parameters: Access to a professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and interpret the purpose and potential use of alternative designer permanent waving techniques	• **Concept Testing** in which the student will: – prepare and present a report on designer permanent waving techniques. *Assessment Tool* *CTS Rubric: Presentation/Reports*	25
• analyze each client's permanent waving needs, recommend a pattern/technique and perform a variety of designer permanent waving techniques	• **Process and Product** in which the student will: – determine each client's suitability for designer permanent waving – select appropriate technique – perform a minimum of three different designer permanent waving physical processes and one complete designer wave. *Assessment Tool* *COSTAT3080: Permanent Waving 5 (Designer)*	10 20 45
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Designer Permanent Waving
 	
 • Definition
 	
 • Purpose
 	
 • Techniques
 	
 • Implements
	The student should:
	
	 • define the term designer permanent waving
	
	 • distinguish between designer permanent waving and conventional waving patterns and techniques
	
	 • identify and describe the purpose of designer permanent waving
	
	 • identify and describe techniques used to perform designer permanent waves; e.g.:
	   – partial/sectional perms
	   – spiral winding
	   – directional wrapping
	
	 • identify and describe implements that may be used to create designer permanent waves; e.g.:
	   – spiral rods
	   – clamps
	   – square rods.	

Planning and Designing the Designer Permanent Wave	• analyze each client's hair and scalp • identify preferred hairstyles • describe how to support each style with aid of a designer permanent wave • design sectioning, blocking and winding patterns to achieve desired support and waves/curls • select implements appropriate to achieving the desired support and waves/curls • select appropriate chemical waving and neutralizing chemicals.	
Performing the Designer Permanent Wave	• drape and prepare each client • section, block and wind hair on waving implements • apply waving lotions according to manufacturer's instructions • facilitate the softening/curling processes according to manufacturer's instructions	

COURSE COS3090: RELAX/STRAIGHTEN HAIR

Level:	Advanced
Theme:	Chemical Services: Permanent Waving
Prerequisites:	COS2080 Permanent Waving 4 (Client Services)
	COS2070 Permanent Waving 3 (Heat-assisted)
	COS2060 Permanent Waving 2 (Cold Waving)
	COS1050 Permanent Waving 1 (The Physical Process)
	COS1010 Personal Images
Description:	Students describe the purposes and products available to physically and chemically relax and straighten hair, and identify, describe and practise safe relaxing and straightening techniques.
Parameters:	Access to a professional hairstyling facility.
	Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • identify and describe methods, technology, chemicals and other products used to relax or straighten hair and the effect of these services on the hair and scalp	*Assessment of student achievement should be based on:* • **Concept Testing** in which the student will: – prepare and present a report on hair relaxing and straightening including methods, products and effects to standards indicated on a presentation performance chart – given 25 questions of hair relaxing and straightening, respond correctly to 20. *Assessment Tool* *Board Exam Review for Cosmetology:* – *Chemical Hair Relaxing* – *Thermal Hair Straightening* *CTS Rubric: Presentation/Reports*	20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• analyze the hair and scalp to determine their suitability for straightening or relaxing services, determine type of service to offer and products to use, and perform safe and sanitary hair relaxing and straightening procedures	• **Process and Product** in which the student will:
	– perform a minimum of one hair relaxing and one hair straightening procedure including:
	  • hair and scalp analysis
	  • client preparation
	  • sanitary practices
	  • safe practices and procedures
	to standards indicated on a hair relaxing and straightening performance chart.
		
		20
		10
		10
		40

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	  Basic Competencies Reference Guide and any
	    assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes
	The student should:	
Relaxing and Straightening		
• Definitions	• define the terms hair relaxing, hair straightening, thermal pressing/combing/brushing and soft curl permanent wave	
• Methods	• describe the physical and chemical-assisted methods available to relax and/or straighten hair	
	• explain the advantages/disadvantages of available hair relaxing and hair strengthening methods	
• Implements	• describe and demonstrate safe use of implements used when relaxing and straightening hair	

COURSE COS3100: WAVE, RELAX & STRAIGHTEN HAIR (CLIENT SERVICES)

Level: Advanced

Theme: Chemical Services: Permanent Waving

Prerequisites:
COS3090 Relax/Straighten Hair
COS2080 Permanent Waving 4 (Client Services)
COS2070 Permanent Waving 3 (Heat-assisted)
COS2060 Permanent Waving 2 (Cold Waving)
COS1050 Permanent Waving 1 (The Physical Process)
COS1010 Personal Images

Description: Students analyze a client's hair and scalp, and recommend appropriate waving, relaxing and straightening services.

Parameters: Access to a professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • consult with and analyze a client's waving, relaxing and straightening needs • recommend and promote appropriate services and treatments • perform client-approved services to a client's satisfaction	*Assessment of student achievement should be based on:* • **Process and Product** in which the student will: – determine clients' waving, relaxing or straightening needs and perform a minimum of one waving, relaxing and straightening procedures including: • client consultation and analysis • client preparation • pre-conditioning, where necessary • waving, relaxing or straightening service • post-conditioning • forming and finishing. *Assessment Tool* *COSTAT3100: Wave, Relax & Straighten (Client Services)*	 20 10 10 45 5 10

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with hats, coats and other personal belongings • drape clients appropriately • remove hair ornaments, if present.	
Client Consultation and Analysis	• demonstrate care, concern and tact during the consultation process • analyze each client's hair and scalp to determine waving, relaxing or straightening needs • advise each client of advantages/disadvantages of different services and maintenance needs of each service • recommend waving, relaxing or straightening service • confirm each client's preferred services before starting any service.	
Preparation	• plan the service • design the sectioning and handling patterns • select implements, chemicals and materials required to perform the service • prepare the work area.	

COURSE COS3110: COLOURING 2 (PERMANENT)

Level: Advanced

Theme: Chemical Services: Haircolouring

Prerequisites: COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students describe the purposes and principles of permanent haircolouring, identify permanent colouring products, their active ingredients and their effects on the hair and possible effects on the body, and demonstrate skin and strand testing and retouch and whole head colour applications.

Parameters: Access to professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify and describe:
   – purposes, principles and types of permanent haircolouring
	• **Concept Testing** in which the student will:
	   – prepare and present a report on permanent haircolouring (e.g., principles, products, procedures and safety practices).
		20

– products available to colour hair permanently
   – product selection, mixing and preparation processes
   – safety practices that must be followed when using permanent haircolours
	Assessment Tool
	 CTS Rubric: Presentation/Reports
	   – given 30 questions relating to permanent haircolouring, answer a minimum of 25 questions correctly.
	
	 Assessment Tool
	 Board Exam Review for Cosmetology:
	   – Haircolouring
		25

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 • perform a variety of permanent haircolouring procedures including the application of:
   – coating dyes
   – aniline derivative tints
 • demonstrate basic competencies.
	Assessment of student achievement should be based on:
	 • **Process and Product** in which the student will:
	   – demonstrate safe and sanitary practices when performing a minimum of two permanent haircolouring procedures.
	 Assessment Tool
	   COSTAT3110: Colouring 2 (Permanent)
	
	 • **Observations** of individual effort and interpersonal interaction during the learning process.
	 Assessment Tool
	   Basic Competencies Reference Guide and any assessment tools noted above
		55
		
		 Integrated throughout

Concept	Specific Outcomes	Notes

Permanent Haircolouring Agents	*The student should:*
	 • identify and describe the advantages/ disadvantages among permanent haircolouring agents including:
	   – oxidation tints
	   – vegetable tints
	   – metallic dyes
	   – compound dyes
	 • explain the relationship among terms used to describe oxidation tints; e.g.:
	   – aniline derivative tints
	   – penetrating tints
	   – amino tints
	   – synthetic—organic tints
	 • explain the action of para-phenaline diamine and hydrogen peroxide in permanent haircolouring
	 • compare the purpose of:
	   – penetrating tints
	   – coating dyes
	   – fillers.	

COURSE COS3120: COLOUR REMOVAL 2

Level:	Advanced
Theme:	Chemical Services: Haircolouring
Prerequisites:	COS2100 Colour Removal 1 COS2090 Colouring 1 COS1030 Hair & Scalp Care 1 COS1010 Personal Images
Description:	Students analyze the condition of the hair and scalp and the nature of colour in/on hair, and prepare and apply various colour removal products to regrowths and whole heads of hair.
Parameters:	Access to professional hairstyling facility. **Note:** Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe the range of colour removal methods, techniques and products available to professional cosmetologists, and the safety and sanitation required before, during and after each colour removal service	• **Concept Testing** in which the student will: – prepare and present a report on the range of colour removal methods, techniques and products available to professional cosmetologists and the safety and sanitation procedures required when using different products. *Assessment Tool* *CTS Rubric: Presentation/Reports*	20
• analyze the hair and scalp, and determine their suitability to receive colour removal services		40

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
• perform a variety of safe and sanitary colour removal procedures including the use of:
  – bleaches (oil, cream, powder)
  – dye solvents
  – other colour removers
 	
• demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	• **Process and Product** in which the student will:
	  – perform a minimum of one of each of the following colour removal procedures:
	    • bleaching
	    • frosting, highlighting, etc.
	    • colour stripping.
	
	Assessment Tool
	  COS3120: Colour Removal 2
	
	• **Observations** of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	  Basic Competencies Reference Guide and any assessment tools noted above
		40
		
		Integrated throughout

Concept	Specific Outcomes	Notes

Colour Removal Chemicals	*The student should:*
	
	• name, describe and differentiate among available colour removal (decolourization) chemicals; e.g.:
	  – bleaches
	  – dye removers
	
	• explain the action and effects on the hair and scalp of different bleaching agents including:
	  – oil bleach
	  – cream bleach
	  – powder bleach
	
	• explain the purpose and action of protinators/activators
	
	• explain the action and distinguish between the uses of:
	  – oil-base colour removers
	  – dye solvents
	
	• describe and explain the advantages/ disadvantages of using low, medium and high volume hydrogen peroxide	

COURSE COS3130: COLOURING & REMOVAL 2 (CLIENT SERVICES)

Level: Advanced

Theme: Chemical Services: Haircolouring

Prerequisites:
COS3120 Colour Removal 2
COS2100 Colour Removal 1
COS2090 Colouring 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students analyze the condition of a client's hair and scalp, consult with the client, and recommend, prepare for, and perform colouring and colour removal services.

Parameters: Access to professional hairstyling facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate competencies related to current haircolouring and colour removal services, including: – hair and scalp analysis – client consultation – service promotion and sales – client preparation – safe and sanitary colour and colour removal applications	*Assessment of student achievement should be based on:* • **Process and Product** in which the student will: – perform a minimum of one colouring and one colour removal service, each to include: • hair and scalp analysis • client consultation • service(s) promotion • client preparation • safe and sanitary colouring procedures • safe and sanitary colour removal procedures • pre- and post-conditioning treatments, where necessary. *Assessment Tool* *COSTAT3130: Colour & Removal 2 (Client Services)*	 10 10 5 5 30 30 10

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
  – pre- and post-conditioning practices, where necessary
  – meeting a client's needs
 	
• demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	• **Observations** of individual effort and interpersonal interaction during the instructional period.
	
	Assessment Tool
	  Basic Competencies Reference Guide and any assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • prepare the work area to encourage and support each client's desire for haircolouring services • greet each client by name and introduce self • follow salon/shop policy for assisting clients with hats, coats and personal belongings • drape clients appropriately • remove hair ornaments, if present.	

Client Consultation and Analysis	• describe each client's needs and wants for haircolouring services
	
	• demonstrate care, concern and tact during the consultation process
	
	• analyze each client's hair and scalp to determine their suitability for various colouring and/or colour removal services
	
	• perform and analyze the results of:
	  – predisposition tests
	  – strand tests	

COURSE COS3140:   BODY THERAPY

Level: Advanced

Theme: Skin Care

Prerequisites: COS2140 Skin Care 2 (Client Services)
                      COS1060 Skin Care 1 (Basic Practices)
                      COS1010 Personal Images

Description: Students apply available technology to provide therapies (heat, electrical and
                      light), apply principles and practices of body therapy, and apply skin care
                      products to body surfaces.

Parameters: Access to professional esthetology facility, experienced esthetologists and
                      current technology.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe the beauty therapist's role, and the therapies and technologies used, and their effects on body health and appearance	• **Concept Testing** in which the student will: – prepare and present a report on the role of beauty therapists in the cosmetology industry and the therapies and technologies. *Assessment Tool* *CTS Rubric: Presentation/Reports*	40
• apply principles and practices of body therapy and use available technologies to enhance each client's wellness and appearance	• **Process and Product** in which the student will: – demonstrate a minimum of four different body therapies. *Assessment Tool* *COSSAT3140: Body Therapy*	60
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Professional Roles and Responsibilities	*The student should:* • define the terms and distinguish among the services performed by: – body therapists – cosmeticians – estheticians – dermatologists • name and describe body conditions that: – may be treated by body therapists and estheticians – must not be treated by body therapists • use and explain terms describing body therapy treatments.	
Body Therapies	• describe the purpose of body therapies • explain possible relationships among body systems and structures and body therapies • describe the advantages/disadvantages of selected therapies; e.g.: – electrotherapy – massage therapy – mask therapy – water/steam therapy – aroma therapy – phyto (herbal) therapy.	
Body Therapy Technology	• name and describe the types and purposes of technology used in performing body therapies • name, describe and demonstrate the safe and sanitary use of technology used to perform body therapy treatments including: – disincrustation – iontopheris – suctioning – spraying/atomizing • define related terms; e.g.: – phoresis – cataphoresis – anaphoresis	

COURSE COS3150: HAIR REMOVAL

Level:	Advanced
Theme:	Skin Care
Prerequisites:	COS1060 Skin Care 1 (Basic Practices) COS1010 Personal Images
Description:	Students describe temporary and permanent hair removal methods, classify each method as a physical, chemical or electrical procedure, and identify and describe safety and sanitary practices for each procedure.
Parameters:	Access to professional esthetology facility and current hair removal technology.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• distinguish between temporary and permanent methods of hair removal and describe the advantages/ disadvantages of each method • distinguish between hairs that may be removed and those that must not be removed	• **Concept Testing** in which the student will: − given 25 questions relating to hair removal, answer a minimum of 20 questions correctly. *Assessment Tool* *Board Exam Review for Cosmetology:* − *Removing Unwanted Hair*	40
• analyze skin to determine suitability for hair removal service and use physical methods to remove hair in a safe and sanitary manner	• **Process and Product** in which the student will: − perform a minimum of one each of the following physical hair removal procedures: eyebrow arching, facial hair removal, waxing using available technology and products.	60
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any* *assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Terms and Techniques	*The student should:*
	• define terms related to excess hair; e.g.:
	  – hirsute
	  – hypertrichosis
	• identify and describe temporary and permanent methods of hair removal
	• define the terms epilation and depilation
	• describe the advantages/disadvantages of various physical, chemical and electrical methods of hair removal.	

Skin and Hair Analysis	• identify hirsute areas of the body and determine:
	  – suitability for hair removal
	  – suitable hair removal method(s)
	• identify and describe body areas/conditions that must not be treated with hair removal methods.	

Temporary Methods of Hair Removal
 	
• Tweezing
 	
• Physical Depilatories
 	
• Chemical Depilatories
	• describe the advantages/disadvantages of selected temporary methods of hair removal including:
	  – physical depilatories; e.g., shaving, tweezing, stringing
	  – chemical depilatories
	• identify and describe types of tweezers used to remove hair
	• demonstrate safe and sanitary use of equipment and techniques to tweeze hair
	• identify and describe types of wax used as depilatories
	• demonstrate safe and sanitary use of hot and cold wax equipment and hot and cold wax hair removal techniques
	• identify and describe types of chemical depilatories
	• describe and demonstrate skin analyses and tests required before using a chemical depilatory.	

COURSE COS3160: SKIN CARE 3 (CLIENT SERVICES)

Level:	Advanced
Theme:	Skin Care
Prerequisites:	COS2140 Skin Care 2 (Client Services) COS1060 Skin Care 1 (Basic Practices) COS1010 Personal Images
Description:	Students analyze a client's skin and determine skin care needs, consult with the client, and recommend, prepare for, and perform approved skin care services.
Parameters:	Access to a professional esthetology facility, equipment and materials.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• welcome and orient the client, analyze skin care needs, recommend and promote the sale of services and products relating to these needs	• **Process and Product** in which the student will: – perform client orientation, preparation and consultation procedures	25
	– promote, sell and perform client-approved skin care services	50
	– promote and sell skin care products related to clients' needs.	25
	Assessment Tool *COSPRAC–3: Practical Experiences: Checklist for Student Performance (Advanced Level)*	
• prepare the client and perform client-approved safe and sanitary skin care services		
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process.	Integrated throughout
	Assessment Tool *Basic Competencies Reference Guide and any assessment tools noted above*	

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • prepare the work area to promote skin care services and products • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • direct and assist clients to be seated at a consultation area.	
Client Consultation and Analysis	• consult with clients to determine their skin care needs and wants • advise clients of the scope of skin care services including technology available and the purpose of each service • analyze each client's skin and recommend services for treatable conditions • advise each client of the advantages/ disadvantages of treating/not treating skin conditions • advise each client of cost of each skin care service • obtain each client's consent before performing skin care services • advise each client of personal skin care procedures and products suitable for use between professional skin care services.	
Equipment, Materials and Implements	• assemble all necessary equipment, materials and implements • prepare the work area for skin care services.	

COURSE COS3170: MALE FACIAL GROOMING 1

Level: Advanced

Theme: Male Facial Grooming

Prerequisites: COS2040 Haircutting 1
COS1040 Forming & Finishing 1
COS1030 Hair & Scalp Care 1
COS1010 Personal Images

Description: Students describe principles and demonstrate practices for male facial grooming, including basic skin care, shaving, moustache/beard shaping, trimming and waxing, and nasal and aural hair removal.

Parameters: Access to a professional hairstyling/barber facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe the history, purpose and principles of shaving, and the shaping, trimming and waxing of male facial hair	• **Concept Testing** in which the student will: – prepare and present a report on the history, purpose and principles of male facial grooming. *Assessment Tool* *CTS Rubric: Presentation/Reports*	40

• demonstrate the safe and sanitary handling of implements and technology for male facial grooming and male facial grooming procedures	• **Process and Product** in which the student will:
	– perform a minimum of one each of the following male facial grooming procedures:
	  • shaves (may be performed on a mannequin)
	  • sideburn shaping
	  • moustache shaping/trimming
	  • beard shaping/trimming
	  • moustache waxing.
	
	Assessment Tool
	  COSTAT3170: Male Facial Grooming 1
		60

• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Male Facial Grooming	*The student should:*	

• Historical Trends	• identify and describe historical changes in the:
	  – way in which male facial hair was groomed
	  – technology used to groom male facial hair	

• Practices	• identify and describe male facial grooming practices including:
	  – shaving
	  – moustache shaping, trimming and waxing
	  – beard shaping, trimming and waxing
	  – sideburn shaping and trimming
	  – removal of other superfluous facial hair	

• Implements and Products	• identify, describe and demonstrate the safe and sanitary use of male facial grooming implements and products including:
	  – razors
	  – scissors
	  – clippers
	  – strops
	  – hones
	  – latherizers
	  – steamers
	  – talc
	  – pre-shave/after-shave lotions
	  – beard and moustache waxes
	  – hot towels.	

Facial Shaving	• list and describe the procedure followed to perform a facial shave • describe the relationship between the facial shaving procedure and the skeletal structure of the face • perform a facial shave adhering to current health and safety regulations concerning the handling of human tissue • describe and demonstrate the use of styptics to stop bleeding of minor cuts.	Facial shaves should be performed on inflated balloons. The use of styptic powder is recommended.

COURSE COS3180:   MALE FACIAL GROOMING 2 (CLIENT SERVICES)

Level: Advanced

Theme: Male Facial Grooming

Prerequisites: COS3170 Male Facial Grooming 1
                    COS2040 Haircutting 1
                    COS1030 Hair & Scalp Care 1
                    COS1010 Personal Images

Description: Students analyze a client's face to determine facial grooming needs, consult with the client, and recommend and perform male facial grooming services, as required.

Parameters: Access to a professional hairstyling/barber facility.

                    Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• welcome, orient and consult with and analyze a client's needs for male facial grooming services and products, and recommend and promote the sale of these services and products	• **Process and Product** in which the student will: – perform a minimum of one each of the following services: • shaves (may be performed on mannequins) • sideburn shaping/trimming • moustache shaping/trimming • beard shaping/trimming • moustache waxing • removal of other superfluous facial hair.	 50 10 15 10 10 5
• perform client-approved safe and sanitary male facial grooming procedures to a client's satisfaction	*Assessment Tool* *COSTAT3180: Male Facial Grooming 2 (Client Services)*	
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • prepare the work area to encourage and support the sale of male facial grooming services and products • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • drape clients appropriately.	
Client Consultation and Analysis	• describe each client's needs for facial grooming services • analyze each client's facial shape, features and skin conditions • select suitable grooming services • recommend services and related products to clients.	

Performing Services	• drape, prepare and protect clients appropriate to each service
	
	• prepare the work area
	
	• perform facial grooming services* agreed to by client including:
	  – shaving
	  – sideburn shaping/trimming
	  – moustache shaping/trimming
	  – beard shaping/trimming
	  – moustache waxing
	  – removal of other superfluous facial hair.
		Facial shaves should be performed on inflated balloons.

Safety and Sanitation	• follow safe and sanitary practices and procedures • perform first aid for minor cuts • maintain a clean, safe work area • sanitize implements after each use and return to their proper storage areas • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

★ Additional services may include facial massage and related treatments, removal of aural and nasal hair, beard/moustache colouring.

COURSE COS3190: NAIL TECHNOLOGY

Level: Advanced

Theme: Nail Care

Prerequisites: COS1070 Manicuring 1
COS1010 Personal Images

Description: Students describe causes of nail breakage and damage, demonstrate techniques used to repair damaged nails and apply artificial nails, and describe effects of artificial/sculptured nails on natural nails.

Parameters: Access to a professional esthetology facility and current nail technology.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• define nail technology and describe current nail technology services and their purpose	• **Concept Testing** in which the student will: – prepare and present a report on current trends and practices in nail technology. *Assessment Tool* *CTS Rubric: Presentation/Reports*	10
• identify, describe and demonstrate the safe and sanitary use of materials and implements associated with nail technology services • analyze hands and nails and perform a variety of nail technology services; e.g., applying and maintaining: – nail tips – nail wraps – acrylic nails – fill-ins – gels	• **Process and Product** in which the student will: – perform a minimum of three analyses of hands and nails to determine their suitability for nail technology services and perform a minimum of two nails, from any four of the following nail technology services listed below including the application and maintenance of: • nail tips • nail wraps • acrylic nails • fill-ins • gels. *Assessment Tool* *COSTAT3190: Nail Technology*	90
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Nail Technology • Definition • Types of Services • Materials and Implements	*The student should:* • define the term nail technology • identify and describe materials and implements that may be used to perform each type of nail technology service and the advantages/disadvantages of each • distinguish between nail technology services and basic manicuring.	

Nail Tipping/Gels
• Preparation
 	
• Pre-service Procedures
 	
• Application
 	
• Post-service Procedures
 	
• Maintenance and Removal
	• prepare materials and implements required to perform a nail tip/gel service
	
	• perform a pre-service sanitation procedure
	
	• analyze each client's hands and nails, advise clients about the nature of services and post-service maintenance required
	
	• select a nail tipping service based on the consultations and analyses
	
	• apply the nail tips/gels according to the manufacturer's instructions, complete shaping and offer basic manicuring procedures
	
	• perform a post-service procedure including:
	  − follow-up appointment
	  − sale of related products
	  − sanitizing work area and implements
	
	• demonstrate procedures to maintain and remove nail tips.
		The course learner expectation may be achieved by performing services on one or more nails.

Nail Wrapping • Preparation	• prepare materials and implements required to perform a nail wrap service	

COURSE COS3200: PEDICURING

Level: Advanced

Theme: Nail Care

Prerequisites: COS1070 Manicuring 1
COS1010 Personal Images

Description: Students describe relationships between a manicure and pedicure, and identify and demonstrate a pedicuring procedure, including foot massage.

Parameters: Access to a professional esthetology facility and equipment.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• describe the purpose of pedicuring and the relationship between a manicure and pedicure	• **Process and Product** in which the student will: – analyze feet and toe nails – select and perform a minimum of three pedicuring services.	40 60
• identify and describe the basic structure of feet and the diseases and disorders that may affect feet	*Assessment Tool* *COSTAT3200: Pedicuring*	
• analyze feet, determine their suitability for pedicure services, prepare a pedicure work area, and perform pedicure procedures including foot massage		
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

COURSE COS3200: PEDICURING (continued)

Concept	Specific Outcomes	Notes
Pedicure Defined	*The student should:* • define the terms pedicure and pedicurist • compare manicuring with pedicuring.	
Anatomy and Physiology	• identify and describe the basic structure of the feet, toes and toenails • explain the relationship among the various parts of the nail and surrounding tissues.	
Foot and Nail Disorders, Diseases and Treatments	• list and describe disorders and diseases of the feet and nails that − may be treated by a pedicurist − may not be treated by a pedicurist.	
Foot and Nail Analysis	• analyze the condition of feet and toenails to determine treatable/non-treatable conditions • list and describe the procedure and purpose of services that may be used to treat treatable foot and toenail conditions.	
Equipment, Cosmetics and Implements	• identify, describe and demonstrate safe and sanitary use of pedicure equipment, cosmetics and implements.	
Pedicure Services	• perform pedicure services including: − client analysis and consultation − foot and nail preparation − nail and cuticle shaping − foot massage − conditioning − nail polishing, if required.	The nail-wax/baths/ treatments may be appropriately used to condition feet.
Safety and Sanitation	• identify and follow safe and sanitary pedicure procedures • perform first aid for minor cuts • maintain a clean, safe work area • sanitize and return materials to proper storage areas after use • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS3210:   NAIL CARE (CLIENT SERVICES)

Level: Advanced

Theme: Nail Care

Prerequisites: COS3200 Pedicuring
                      COS2150 Manicuring 2
                      COS1070 Manicuring 1
                      COS1010 Personal Images

Description: Students analyze client's hands, feet and nails and determine manicure/pedicure needs, consult with the client and recommend services and products to enhance the condition and appearance of nails, and use available technology to perform manicures/pedicures and related services.

Parameters: Access to a professional esthetology facility and equipment.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• meet, greet and orient a client to available manicure and pedicure services	• **Applied Problem Solving** in which the student will: – perform client orientation and preparation procedures.	25
• consult with a client, analyze tissues of hands and feet, determine nail care needs, and recommend and perform services agreed to by client in a safe and sanitary manner	• **Process and Product** in which the student will: – consult with clients, analyze tissues and needs, perform a minimum of two manicure and two pedicure services appropriate to clients' needs. *Assessment Tool* *COSTAT3210: Nail Care (Client Services)*	75
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Orientation	*The student should:* • greet each client by name and introduce self • follow salon/shop policy for assisting clients with coats, hats and personal belongings • direct and assist clients to be seated at work area • discuss clients' preferred nail services.	
Client Consultation and Analysis	• analyze client's hands and nails/feet and toenails and assess their suitability for manicure/pedicure services • identify alternative services and recommend services based on analyses • consult with client to determine preferred services • advise client of cost of each service • ask client to remove rings and other hand or foot adornments and have client put them in a safe place.	
Equipment, Cosmetics and Implements Preparation	• prepare the work area for client-approved service(s) • access and arrange all items required for the service(s).	

Performing Services	• perform manicure and related services including:
	  – plain manicures/pedicures
	  – oil manicures
	  – hand and arm massage/foot massage
	  – nail art
	• use available technology to perform manicure, pedicure, massage and nail art services
	• advise clients how they may maintain the health and groomed appearance of their hands, feet, nails and nail art.	

COURSE COS3220:   WIGS & TOUPEES

Level: Advanced

Theme: Special Effects/Services

Prerequisites: COS3110 Colouring (Permanent)
                        COS3050 Haircutting 2
                        COS2180 Hairpieces & Extensions
                        COS2090 Colouring 1
                        COS2040 Haircutting 1
                        COS1040 Forming & Finishing 1
                        COS1030 Hair & Scalp Care 1
                        COS1010 Personal Images

Description: Students identify the purpose of wigs and toupees, and factors affecting the
                        quality of wigs and toupees, and demonstrate safe and sanitary procedures used
                        to clean, colour, cut, fit, repair and style wigs and toupees, as well as take head
                        measurements and samples.

Parameters: Access to an assortment of wigs and toupees.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• explain the reasons why people wear wigs and toupees	• **Concept Testing** in which the student will: – prepare and present a report on wigs and toupees which describes the reasons they may be worn and quality factors that help determine their appearance and cost.	20
• describe different types of wigs and toupees, the advantages/ disadvantages of using natural hair/synthetic fibres and related quality factors	*Assessment Tool* *CTS Rubric: Presentation/Reports* • **Process and Product** in which the student will: – perform a comprehensive range of wig and toupee services including:	

• block and secure wigs and hairpieces and perform services (on natural hair and synthetic fibre hair goods) including:
 – cleaning
 – conditioning
 – cutting/shaping
 – forming and finishing
	• blocking and securing
	    • cleaning
	    • cutting/shaping
	    • forming and finishing
	    • minor repairs
	    • colouring
	    • measuring and sampling
	    • placing and securing on head.
	
	 Assessment Tool
	    COSTAT3220: Wigs & Toupees
		5
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		 5

COURSE COS3220: WIGS & TOUPEES (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
   – minor repairs
   – colouring (temporary, semi-permanent)
   – measuring and sampling
 	
 • demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	 • **Observations** of individual effort and interpersonal interaction during the learning process.
	
	 Assessment Tool
	   Basic Competencies Reference Guide and any assessment tools noted above
		Integrated throughout

Concept	Specific Outcomes	Notes

Uses of Wigs and Toupees	*The student should:*
	
	 • distinguish between wigs and toupees:
	   – hand-tied
	   – wefted
	
	 • explain why wigs and toupees are worn
	
	 • list factors that may influence the wearing of hair goods; e.g.:
	   – fashion
	   – fad
	   – trend
	   – hair loss
	
	 • describe other commercial uses for hair goods (e.g., displays, theatrical).	

Types of Wigs and Toupees	• distinguish among different types of wigs and toupees; e.g.:
	   – full wigs
	   – half wigs
	   – partial wigs
	   – theatrical wigs
	   – fashion wigs
	   – display wigs
	
	 • describe the advantages/disadvantages of each type of wig and toupee.	

COURSE COS3230:   HAIR GOODS (CLIENT SERVICES)

Level:	Advanced
Theme:	Special Effects/Services
Prerequisites:	COS3220 Wigs & Toupees
	COS3110 Colouring (Permanent)
	COS3050 Haircutting 2
	COS2180 Hairpieces & Extensions
	COS2090 Colouring 1
	COS2040 Haircutting 1
	COS1040 Forming & Finishing 1
	COS1030 Hair & Scalp Care 1
	COS1010 Personal Images
Description:	Students analyze hair goods, make decisions relating to services needed, perform client-approved services to hair goods, and take a client's head measurements in preparation for ordering a custom-made hair good.
Parameters:	Access to a professional hairstyling or hair goods facility.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• analyze a client's hair goods, recommend care, maintenance and enhancement services, promote the sale of hair goods related care and maintenance products	• **Applied Problem Solving** in which the student will: – analyze a minimum of three different hair goods, recommend services and home care products.	25

• perform a variety of services to hair goods to ensure that they are maintained and enhanced to a client's satisfaction; measure a client's head and take samples of a client's hair in preparation for ordering a wig or toupee	• **Process and Product** in which the student will:
	– perform a variety of services relating to hair goods including:
	  • cleaning
	  • cutting/shaping
	  • forming and finishing
	  • repairing (minor)
	  • colouring
	  • measuring and sampling
	  • placing and securing
	
	Assessment Tool
	    COSTAT3230: Hair Goods (Client Services)
		
		15
		10
		15
		10
		10
		10
		5

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Hair Goods Analysis and Consultation	*The student should:*
	• analyze hair goods to determine:
	  – condition
	  – fibre/hair type and quality
	  – construction
	  – need for repair
	  – areas for enhancement
	• recommend services to clients that will help maintain and enhance their hair goods
	• suggest and promote the sale of home care hair goods products
	• demonstrate sensitivity and concern about each client's needs.	

Hair Goods Services
• Care and Maintenance
 	
• Measuring and Sampling
	• perform services on hair goods agreed to by clients including:
	  – cleaning
	  – forming and finishing
	  – cutting/shaping
	  – repairing (minor)
	  – temporary and semi-permanent colouring
	  – placing and securing
	• take and record measurements of a client's head and demonstrate process of taking hair samples from different areas of the head.
		Caution must be exercised when working on clients' hair goods.
		
		Cleaning fluid fumes may be harmful. Use only in well-ventilated area.

Safety and Sanitation	• follow safe and sanitary hair goods handling procedures • maintain a clean, safe work area • sanitize and return items to their proper storage areas after use • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS3240: THEATRICAL MAKEUP 3 (CHANGING IMAGES)

Level: Advanced

Theme: Special Effects/Services

Prerequisites: COS2190 Theatrical Makeup 2 (Planning the Images)
COS1080 Theatrical Makeup 1 (Basic Principles)
COS1010 Personal Images

Description: Students identify materials and describe procedures used to construct and apply two- and three-dimensional makeup and prostheses, analyze images of characters and design, plan and apply theatrical makeup to recreate images of characters.

Parameters: Access to a theatrical makeup facility, equipment and supplies.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe materials and processes used to construct and apply three-dimensional makeup and prostheses	• **Concept Testing** in which the student will: – prepare and present a report on the materials and processes used to construct and apply three-dimensional makeup and prosthesis. *Assessment Tool* *CTS Rubric: Presentation/Reports*	20
• design and execute plans to change body images of self and/or others by using theatrical makeup, two- and three-dimensional makeup materials and hair goods	• **Applied Problem Solving** in which the student will: – prepare worksheets to describe planned changes to a minimum of one body image (including a total head image, nasal and oral image, hand and arm image) with the aid of two- and three-dimensional makeup and hair goods.	30
• maintain a portfolio of designs created, including details about makeup, prostheses and hair goods used	• **Process and Product** in which the student will: – perform a minimum of one each of two- and three-dimensional makeups. *Assessment Tool* *COSTAT3240: Theatrical Makeup 3 (Changing Images)*	50
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Three-dimensional Makeup
 	
• Types and Uses
 	
• Materials
 	
• Theatrical Prostheses
 	
• Attaching and Removing
	The student should:
	
	• identify and describe different types and uses of three-dimensional theatrical makeup
	
	• describe materials used to create three-dimensional theatrical makeup
	
	• describe the purpose, advantages and disadvantages of using prosthetic pieces
	
	• describe procedures available to:
	  – construct prosthetic pieces
	  – prepare the client's skin tissues to receive a prosthetic piece
	  – conceal edges of different prosthetic pieces
	
	• describe procedures and products used to attach and remove different types of three-dimensional makeups.
		Art and drama teachers may be consulted about the design and construction of masks.

Designing and Planning Image Changes	• prepare detailed worksheets for each image change to clearly identify:
	  – specific image changes to be made
	  – images to be created
	  – materials required
	  – recommended procedures.	

Implementing Image Changes	• prepare materials required for each image change
	
	• change images using a variety of theatrical makeup techniques including:
	  – two-dimensional makeup
	  – three-dimensional makeup
	  – hair goods.	

Safety and Sanitation	• protect the health and safety of clients while attaching and removing theatrical makeups • maintain a clean, safe work area • sanitize and return materials to proper storage areas after use • dispose of waste materials in an environmentally safe manner.	Review local and provincial health and safety regulations.

COURSE COS3250:   THEATRICAL MAKEUP 4 (CLIENT SERVICES)

Level: Advanced

Theme: Special Effects/Services

Prerequisites: COS3240 Theatrical Makeup 3 (Changing Images)
                        COS2190 Theatrical Makeup 2 (Planning the Images)
                        COS1080 Theatrical Makeup 1 (Basic Principles)
                        COS1010 Personal Images

Description: Students provide a client or client group with the theatrical makeup services to
                        create images that are appropriate to different lighting and portrayal conditions.

Parameters: Access to a theatrical makeup facility, equipment and supplies.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• consult with and assist in providing theatrical makeup services to a client or client group to enhance and to change body images with the aid of two- and three-dimensional makeup and hair goods	• **Applied Problem Solving** in which the student will: – meet clients' needs for theatrical makeup services by identifying and confirming image changes required.	10
	• **Process and Product** in which the student will: – prepare a worksheet(s) for each client – prepare appropriate materials and prostheses – use appropriate two- and three-dimensional makeup techniques and products to create intended images.	25 25 40
	Assessment Tool *COSTAT3250: Theatrical Makeup 4 (Client Services)*	

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • demonstrate basic competencies.	*Assessment of student achievement should be based on:* • **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Client Consultations	*The student should:* • describe image changes required by client/client group; e.g.: − individual performer − drama club − theatrical group • review pictures/photographs of desired image(s) and other information relating to the characters in the production(s) • draft/design images, share them with client(s) and make changes as required.	
Worksheets	• prepare a worksheet for each client identifying: − materials required − procedures to follow − image(s) to be created • assess time required to create each makeup.	
Preparation • Materials • Clients	• prepare two- and three-dimensional makeup materials: − makeup products − applicators − prosthetic pieces − hair goods • advise client(s) of time required to create makeup(s) and when to report to makeup area.	

COURSE COS3260: FACIAL & BODY ADORNMENT

Level: Advanced

Theme: Special Effects/Services

Prerequisite: COS1010 Personal Images

Description: Students identify adornments available to enhance or change appearances, describe effects of different adornments, demonstrate safe and sanitary service procedures, and explore alternative forms of body adornment.

Parameters: Access to professional esthetology or other hygiene facility and appropriate equipment and materials.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• identify and describe current fashions trends and fads in facial and body adornment and their purpose	• **Concept Testing** in which the student will: – prepare and present a report on facial and body adornment identifying and describing: • purpose • types • safe and sanitary use. *Assessment Tool* *CTS Rubric: Presentation/Reports*	30
• describe safe and sanitary facial and body adornment procedures; e.g., – attaching/removing false eyelashes – colouring eyebrows and lashes	• **Process and Product** in which the student will: – perform safe and sanitary facial and body adornment services including: • false eyelash services • colouring brows and lashes • other services currently in fashion. *Assessment Tool* *COSTAT3260: Facial & Body Adornment*	20 20 30
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Adornments*	*The student should:* • define the term adornments • describe their purpose and the various ways available to adorn the face and/or body • classify each adornment identified as a fashion item, a tradition/cultural item or a fad item • identify and describe safety and sanitary practices that must be followed before, during and after adornment processes • identify and describe tools and materials used in adornment processes.	
False Eyelashes • Types • Preparation • Shaping • Curling	• describe the different types of false eyelashes available and the advantages/disadvantages of each type • prepare materials required to trim, feather and apply lashes • analyze each "client's" facial shape and natural lashes and determine type(s) of false lashes required • select an adhesive/attach as directed • test on clients for possible allergic reaction • trim and feather lashes to create a natural look • curl lashes: 　－ before application 　－ after application	

COURSE COS3270: CREATIVE COSMETOLOGY

Level: Advanced

Theme: Enterprise and Competition

Prerequisites:
COS1070 Manicuring 1
COS1060 Skin Care 1 (Basic Practices)
COS1040 Forming & Finishing 1
COS1020 Hair Graphics 1
COS1010 Personal Images

Description: Students describe current cosmetology-related fashions, fads and trends, and apply design principles to create skin, hair and nail stylings that may become fads or trends.

Parameters: Access to a professional hairstyling/esthetology facility.

Note: Journeyman hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
 • produce worksheets that describe:
   – current fashion, fads or trends for hair, nail and facial stylings
   – procedures to create each styling
	Assessment of student achievement should be based on:
	
	 • **Concept Testing** in which the student will:
	   – prepare plans to guide the reproduction of a current fashion, trend or fad:
	     • hairstyling
	     • makeup styling
	     • nail styling.
	
	 Assessment Tool
	   CTS Rubric: Presentation/Reports
		
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		 10

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
 • reproduce each styling, using appropriate resources
 	
 • apply design principles to:
 – develop worksheets for creative and innovative hair, makeup and nail stylings
 – produce each styling using the worksheets as guides
 	
 • demonstrate basic competencies.
	Assessment of student achievement should be based on:
	
	 • **Process and Product** in which the student will:
	 – design and create a minimum of two innovative stylings for:
	   • hair
	   • makeup
	   • nails.
	
	 Assessment Tool
	   COSTAT3270: Creative Cosmetology
	
	 • **Observations** of individual effort and interpersonal interaction during the learning process.
	
	 Assessment Tool
	   Basic Competencies Reference Guide and any assessment tools noted above
		
		30
		20
		20
		
		Integrated throughout

Concept	Specific Outcomes	Notes
Current Fashions, Fads and Trends • Classify	*The student should:* • identify and describe current fashions, fads and trends in hair, nail and facial stylings • classify each identified styling as a fashion, trend or fad and gives reasons for each categorization	

COURSE COS3280:   SALES & SERVICE 2 (EFFECTIVENESS)*

Level: Advanced

Theme: Enterprise and Competition

Prerequisites: COS2210 Sales & Service 1 (Principles & Practices)
                      COS1010 Personal Images

Description: Students distinguish between sales and service techniques that encourage positive
                      client responses and those that evoke negative responses, demonstrate effective
                      sales and service techniques, and identify and demonstrate duties performed by
                      salon receptionists.

Parameters: No specialized equipment or facilities.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• design a client survey and develop a client profile that identifies client demographics and level of satisfaction with the salon	• **Applied Problem Solving** in which the student will: – survey and develop a client profile to identify levels of satisfaction and other factors including: • age • gender • occupation • income range • family/marital status • area of residence • type of residence.	30
• develop and implement a plan to enhance client satisfaction and increase the sale of services and cosmetics and products for personal grooming, and evaluate outcomes of the plan	• **Process and Product** in which the student will: – develop a plan to enhance client satisfaction and increase sales of services and products – implement one or more parts of the plan. *Assessment Tool* *COTATS3280: Sales and Service 2*	30 40
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

* For additional courses relating to salesmanship and retailing see:
  • Management and Marketing Guide to Standards and Implementation.

Concept	Specific Outcomes	Notes

Client Survey	*The student should:*
	
	• create an instrument to survey the demographics of clients and their level of satisfaction with the salon including:
	  – service
	  – attention
	  – friendliness
	  – cleanliness
	  – professionalism
	
	• analyze the data collected and prepare a report that includes recommendations for action.	

Client Profile	• use the prepared report to develop a profile of clients who use the salon and include details of frequency of use and levels of client satisfaction.	

Achieving Closure	• describe and demonstrate how client resistance (e.g., objections, concerns, excuses) may be addressed
	
	• describe and demonstrate techniques used to:
	  – close a sale
	  – offer reassurance and support for purchasing decisions
	  – address after-sale and follow-up services.	

Sales and Service Plan	• create a plan to increase the level and quality of sales and services offered to clients and to enhance the public image and appearance of the salon • create an instrument to evaluate each part of the plan.	

Implementing the Plan	• select and implement one or more parts of the plan
	
	• evaluate the results of the changes, for example, on:
	  – client satisfaction
	  – client use of salon
	  – sale of services
	  – sale of products.	

COURSE COS3290:   COMPETITION COSMETOLOGY

Level:	Advanced
Theme:	Enterprise and Competition
Prerequisites:	COS1040 Forming & Finishing 1 COS1030 Hair & Scalp Care 1 COS1020 Hair Graphics 1 COS1010 Personal Images
Description:	Students identify opportunities to participate in competitions relating to cosmetology, describe the qualities needed to be competitive and the judging systems used at various levels of competitions and demonstrate ability to be competitive in one or more areas of cosmetology.
Parameters:	Access to a professional hairstyling/esthetology facility.
	Note: Journeymen hairstylist qualification required.

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will: • identify and describe qualities of a successful competition cosmetologist and methods used to judge competitions	*Assessment of student achievement should be based on:* • **Concept Testing** in which the student will: – prepare and present a report on "What Makes A Successful Competition Cosmetologist." *Assessment Tool* *CTS Rubric: Presentation/Reports*	20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• demonstrate qualities consistent with being a competition cosmetologist	• **Process and Product** in which the student will:
	   – demonstrate qualities, skills and artistry associated with being a competition cosmetologist including:
	     • personal qualities
	     • professional qualities
	     • organization skills
	     • planning skills
	     • artistry in one or more areas.
		
		 10
		 10
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		 10
		 40

• demonstrate competition standard artistry in one or more cosmetology-related area(s)	*Assessment Tool* *COS3290: Competition Cosmetology*	
• demonstrate basic competencies.	• **Observations** of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes

Qualities and Skills	*The student should:*
	
	 • identify and describe qualities and abilities associated with successful competition cosmetologists:
	   – personal qualities
	   – professional qualities
	   – management abilities
	   – artistry	

• Personal Qualities	• demonstrate personal qualities including:
	   – dedication
	   – attention to detail
	   – "sticktoitiveness"
	   – patience	

• Professional Qualities	• demonstrate professional qualities including:
	   – projecting a positive image
	   – practising hygiene and sanitation
	   – respecting rights of others	

2005 CTS AMENDMENTS
to the
Electro-Technologies
Guide to Standards and Implementation

Summary of Curriculum Changes

Prerequisite changes:
- ELT3060: Digital Technology 3 is no longer a prerequisite to:
  - ELT3070: Digital Applications
- ELT3070: Digital Applications is no longer a prerequisite to:
  - ELT3080: Microprocessors

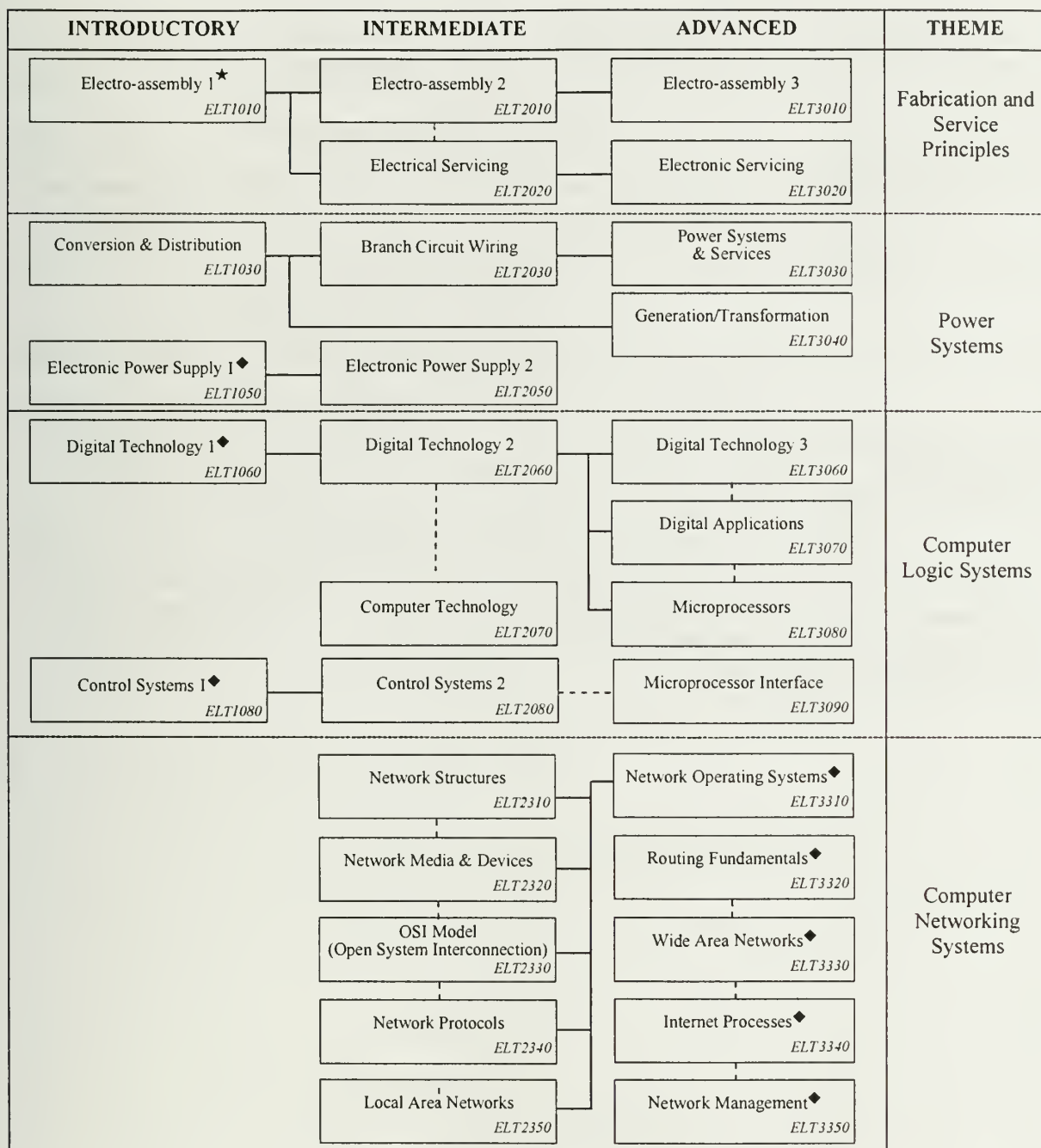(ELT2060: Digital Technology 2 is the immediate prerequisite to both ELT3070: Digital Applications and ELT3080: Microprocessors.)

Section B
- **Remove** page B.5 (Revised 2004) and **replace** with new page B.5 (Revised 2005).

Section F
- **Remove** pages F.25 and F.29 (1997) and **replace** with new pages F.25 and F.29 (Revised 2005).

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Electro-assembly 1 ★ ELT1010	Electro-assembly 2 ELT2010	Electro-assembly 3 ELT3010	Fabrication and Service Principles
	Electrical Servicing ELT2020	Electronic Servicing ELT3020	
Conversion & Distribution ELT1030	Branch Circuit Wiring ELT2030	Power Systems & Services ELT3030	Power Systems
		Generation/Transformation ELT3040	
Electronic Power Supply 1 ◆ ELT1050	Electronic Power Supply 2 ELT2050		
Digital Technology 1 ◆ ELT1060	Digital Technology 2 ELT2060	Digital Technology 3 ELT3060	Computer Logic Systems
		Digital Applications ELT3070	
	Computer Technology ELT2070	Microprocessors ELT3080	
Control Systems 1 ◆ ELT1080	Control Systems 2 ELT2080	Microprocessor Interface ELT3090	
	Network Structures ELT2310	Network Operating Systems ◆ ELT3310	Computer Networking Systems
	Network Media & Devices ELT2320	Routing Fundamentals ◆ ELT3320	
	OSI Model (Open System Interconnection) ELT2330	Wide Area Networks ◆ ELT3330	
	Network Protocols ELT2340	Internet Processes ◆ ELT3340	
	Local Area Networks ELT2350	Network Management ◆ ELT3350	

(continued)

_____ Prerequisite   - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.

◆ Refer to specific courses for additional prerequisites.

SCOPE AND SEQUENCE (continued)

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Analog Communication 1 ◆ ELT1090	Analog Communication 2 ELT2090	Analog Communication 3 ELT3100	Communication Systems
Electronic Communication ◆ ELT1100	Radio Communication ELT2100	Amplifiers ELT3110	
Security Systems 1 ◆ ELT1110	Security Systems 2 ELT2110		
	Electro-optics ◆ ELT2120	Data/Telemetry Systems ELT3130	
	Magnetic Control Devices ◆ ELT2130	Motors ELT3140	Robotic and Control Systems
Robotics 1 ◆ ELT1130	Robotics 2 ELT2140	Robotics 3 ELT3150	
	Electronic Controls ◆ ELT2150	Control Applications ELT3160	

———— Prerequisite   - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand.
◆ Refer to specific courses for additional prerequisites

COURSE ELT3070: DIGITAL APPLICATIONS

Level: Advanced

Theme: Computer Logic Systems

Prerequisite: ELT2060 Digital Technology 2

Description: Students experiment with large-scale and very large-scale integrated circuits, and demonstrate their applications to practical situations.

Parameters: Logic probes, logic analyzer, signature analysis, oscilloscopes and related resources.

Supporting Course: ELT3060 Digital Technology 3

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• identify applications and develop prototypes of large-scale integrated circuits	• demonstrating correct handling and use of large-scale integrated circuits (LSICs). Prototyping and troubleshooting digital system such as:
	  – microcomputer
	  – liquid crystal display (LCD) timer with alarm
	  – electronic game
	  – digital voltmeter
	  – digital light meter
	
	• constructing circuits using LSICs incorporated within any video, stereo, audio or computer systems or advanced project of student choice
	
	• experimenting with a practical large digital integration (LDI) system such as:
	  – clock
	  – data transmission
	  – video games.
	
	Assessment Tool
	 ELTLAB–3: Assessment Checklist: Laboratory Practice, Parts 1 and 2
	
	Standard
	 Performance rating of 3 for each applicable task
		50

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• troubleshoot a digital system or prototype with digital equipment	• incorporating a LSIC digital system on a given previous student project or a consumer product, using one of the following instruments to analyze and troubleshoot a circuit:
	  – logic probes
	  – pulser
	  – logic analyzer
	  – signature analyzer
	  – oscilloscopes
	using computer simulation, experimental boards, CAI package or actual equipment.
	
	Assessment Tool
	    ELTLAB–3: Assessment Checklist: Laboratory Practice, Part 3
	
	Standard
	    Performance rating of 3 for each applicable task
		45

• demonstrate established laboratory procedures and safe work practices	• observed performance in following:
	  – established laboratory procedures
	  – correct handling and storage of LSIC and VLSIC chips.
	
	Assessment Tool
	    ELTPSP: Assessment Checklist: Laboratory Procedures and Safety Practices
	
	Standard
	    Performance rating of 3 for each applicable task
		5

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Safety/Resource Management	*The student should:* • demonstrate correct handling and storage of large integrated circuit (LSIC) and very large integrated circuit (VLSIC) chips.	

COURSE ELT3080: MICROPROCESSORS

Level:	Advanced
Theme:	Computer Logic Systems
Prerequisite:	ELT2060 Digital Technology 2
Description:	Students compare the internal architecture of microprocessors and program them, using instruction sets.
Parameters:	Microprocessor trainer/CAI program and related resources.
Supporting Courses:	ELT3060 Digital Technology 3 ELT3070 Digital Applications

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• compare the internal architecture of various families of microprocessors	• explaining the difference in internal architecture between different families of microprocessors • identifying and comparing the following functional sections in a microprocessor: – accumulator – program counter – instruction decoder – controller – data register – address register – stack pointer – index pointer • drawing a block diagram of an advanced microprocessor showing its internal architecture. *Assessment Tool* *ELT3080–1: Presentations/Reports:* *Microprocessors* *Standard* *Performance rating of 3 for each applicable task*	20

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• program a microprocessor, using instruction sets	• writing and executing programs using mnemonic and op codes that complete the following functions:
	– branching
	– additions/subtractions
	– indexed and extended addressing
	– store data and retrieve data from the stack
	– loops
	– moving data between several places.
	
	Assessment Tool
	    ELTLAB–3: Assessment Checklist: Laboratory Practice, Parts 1 and 4
	
	Standard
	    Performance rating of 3 for each applicable task
		55

• describe input/output operations in microprocessors	• writing and executing various programs that use memory input and output devices.
	
	Assessment Tool
	    ELTLAB–3: Assessment Checklist: Laboratory Practice, Part 1
	
	Standard
	    Performance rating of 3 for each applicable task
		20

• demonstrate established laboratory procedures and safe work practices	• observed performance in following:
	– established laboratory procedures
	– procedures to avoid hazard of static electricity
	– procedures indicating awareness of high voltage requirements.
	
	Assessment Tool
	    ELTPSP: Assessment Checklist: Laboratory Procedures and Safety Practices
	
	Standard
	    Performance rating of 3 for each applicable task
		5

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

2005 CTS AMENDMENTS
to the
Management and Marketing
Guide to Standards and Implementation

Summary of Curriculum Changes

New Courses
- MAM1040: E-commerce 1
- MAM2110: E-commerce 2
- MAM3120: E-commerce 3

Section B

- **Remove** pages B.1 (1997) and B.5–B.8 (Revised 2002/Revised 1999) and **replace** with new pages B.1 and B.5–B.8 (Revised 2005).

Section D

- **Remove** page D.1 (1997) and **replace** with new page D.1 (Revised 2005).
- **Add** new pages D.19–D.28 (Revised 2005).

Section E

- **Remove** page E.1 (Revised 1999) and **replace** with new page E.1 (Revised 2005).
- **Add** new pages E.39–E.50 (Revised 2005).

Section F

- **Remove** page F.1 (Revised 1999) and **replace** with new page F.1 (Revised 2005).
- **Add** new pages F.49–F.58 (Revised 2005).

Section G

- **Remove** page G.3 (Revised 1999) and **replace** with new page G.3 (Revised 2005).
- **Add** new pages G.68–G.76 (Revised 2005).

MANAGEMENT AND MARKETING

B. STRAND RATIONALE AND PHILOSOPHY

In our highly competitive, rapidly changing society, management and marketing are generic skills. No matter what you do, how you manage yourself or how you use the resources available to you; you market yourself, your services or the products you make.

Management and Marketing, a strand in Career and Technology Studies, is designed to increase students' abilities to apply effective and efficient systems and strategies of management and marketing within personal, family, workplace, community and global contexts. The management aspect of this strand identifies effective procedures for organizing resources and working with people; whereas, marketing is concerned with pricing, promotion and distribution of ideas, products and services to satisfy consumer needs and wants.

Marketing in this strand takes a retail perspective. Linking student experiences as consumers to marketing in the retail marketplace is a central focus in the marketing systems and strategies theme. Through consumer experiences and simulations, students will investigate various marketing strategies and technologies, including face-to-face approaches, various forms of media and e-commerce, through the eyes of a retail worker, manager or owner. Students will learn retail merchandising strategies that help people engaged in marketing meet the challenge of

ensuring that the right goods or services are in the

right place, at the right time, in the right quantity, at the right price and offered to the right people.

Management in this strand emphasizes business and information management to generate profit within a competitive environment. Knowledge, skills and attitudes will be developed to help students identify and analyze strategies to succeed when working within continuously changing systems. Students will gain experience and confidence through a wide range of practical experiences as they plan, organize, take action, lead, work cooperatively, monitor progress and communicate. Their goal will be to ensure quality and professional service.

This strand provides an opportunity for students to explore the very complex and continuously expanding study of management and marketing systems and strategies. The intent is to help students develop enough background and skills so that, as entry-level employees, they can make an effective contribution right away. Many of the systems and strategies introduced here lead to further learning and specialization, both through workplace experiences and/or post-secondary study.

Management and Marketing builds on the Enterprise and Innovation strand competencies. Learning experiences will help students relate
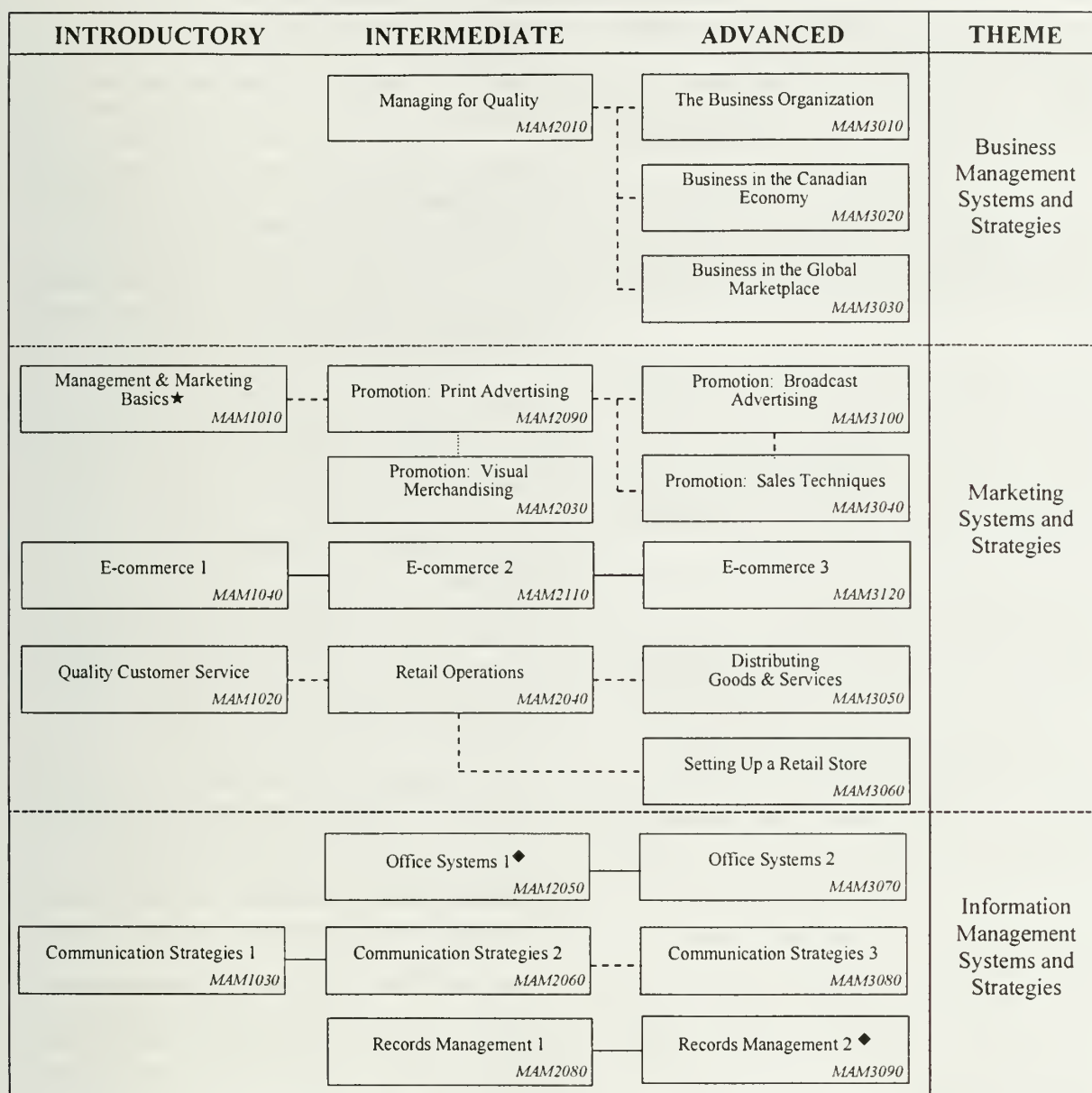
what they already know about how organizations run, how goods are sold and how the economy works. Management and Marketing can help students become aware of and assess a wide range of career opportunities—opportunities in small, medium and large public or private organizations as management and marketing specialists, in related support positions, or as a complement to the technical skills required by people who own and manage their own businesses.

Within the philosophy of Career and Technology Studies, *students* in Management and Marketing *will*:

- identify, analyze, apply and improve systems and strategies related to business and information management and marketing that can be applied personally, throughout CTS and in other study areas

- develop abilities in planning, organizing, leading, monitoring and communicating

- research, analyze, interpret and evaluate information needed in business management, marketing and information management systems and strategies

- develop and apply creative problem-solving and effective decision-making skills within the contexts of business management, marketing and information management systems and strategies

- analyze the role of the individual, family and community as they relate to management and marketing within the Canadian and global economy

- identify areas of interest and talent and relate these to career opportunities in business management and marketing

- demonstrate effort to develop basic competencies.

SCOPE AND SEQUENCE

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
	Managing for Quality *MAM2010*	The Business Organization *MAM3010* Business in the Canadian Economy *MAM3020* Business in the Global Marketplace *MAM3030*	Business Management Systems and Strategies
Management & Marketing Basics ★ *MAM1010* E-commerce 1 *MAM1040* Quality Customer Service *MAM1020*	Promotion: Print Advertising *MAM2090* Promotion: Visual Merchandising *MAM2030* E-commerce 2 *MAM2110* Retail Operations *MAM2040*	Promotion: Broadcast Advertising *MAM3100* Promotion: Sales Techniques *MAM3040* E-commerce 3 *MAM3120* Distributing Goods & Services *MAM3050* Setting Up a Retail Store *MAM3060*	Marketing Systems and Strategies
Communication Strategies 1 *MAM1030*	Office Systems 1 ◆ *MAM2050* Communication Strategies 2 *MAM2060* Records Management 1 *MAM2080*	Office Systems 2 *MAM3070* Communication Strategies 3 *MAM3080* Records Management 2 ◆ *MAM3090*	Information Management Systems and Strategies

——— Prerequisite   - - - - Recommended sequence

★ Course provides a strong foundation for further learning in this strand

◆ Refer to specific courses for additional prerequisites.

COURSE DESCRIPTIONS

Course MAM1010: Management & Marketing Basics
Students identify basic management and marketing concepts, and describe retail merchandising strategies of value to the retail employee, manager or owner.

Course MAM1020: Quality Customer Service
Students identify and describe the target customer and the selling floor, including sales and nonsales activities.

Course MAM1030: Communication Strategies 1
Students improve oral and written business communications skills necessary for efficient and effective management of information. The focus is on business writing strategies and composing at the computer when preparing memorandums, e-mail messages and business letters.

Course MAM1040: E-commerce 1
Students will investigate the concept of e-commerce as a marketing strategy and design an e-commerce Web site to sell products/services.

Course MAM2010: Managing for Quality
Students demonstrate basic managerial skills, by assuming roles and responsibilities of management to coordinate available resources to achieve quality results.

Course MAM2030: Promotion: Visual Merchandising
Students identify different types of visual merchandising, and describe how to construct attention-getting displays and how to evaluate visual merchandising.

Course MAM2040: Retail Operations
Students identify retail operations that are typically performed off the selling floor, away from customers.

Course MAM2050: Office Systems 1
Students identify and describe strategies and procedures in the office environment and managing processes and protocols related to electronic equipment, written communication transmittal and business travelling arrangements.

Course MAM2060: Communication Strategies 2
Students improve their basic oral and written communication strategies necessary to efficient and effective management of information. The focus is on technical writing strategies and composing at the computer when preparing informal business reports and proposals.

Course MAM2080: Records Management 1
Students demonstrate basic records management skills for a manual records system, emphasizing alphabetic coding procedures.

Course MAM2090: Promotion: Print Advertising
Students are introduced to communication channels, delivery strategies and advertising media that can be used to inform potential customers about products and services available in the marketplace.

Course MAM2110: E-commerce 2
Students will enhance their understanding of e-commerce as a marketing strategy and design an e-commerce Web site with special effects and additional content to attract customers and increase their satisfaction.

Course MAM3010: The Business Organization
Students identify and describe organizational structures, management theories and organizations as working units. Students also explain their beliefs of what successful organizations might look like in the future.

Course MAM3020: Business in the Canadian Economy
Students expand and relate their knowledge of economics to how business decisions are made within the community, the province, nationally and internationally.

Course MAM3030: Business in the Global Marketplace
Students identify the opportunities and challenges that confront business people in establishing a global business operation.

Course MAM3040: Promotion: Sales Techniques
Students learn techniques for successful selling.

Course MAM3050: Distributing Goods & Services
Students explore the channels of distribution and modes of transportation used to direct goods from the producer to the consumer.

Course MAM3060: Setting Up a Retail Store
Students develop retail store images, examine potential locations and design store layouts. Students should be given hands-on experience by researching a location for an actual retailing opportunity and design a layout for this retail store. This course focuses on students owning a retail business and learning the necessary steps for success.

Course MAM3070: Office Systems 2
Students demonstrate effective office environment strategies and processes, use electronic office equipment, and manage processes related to electronic communications and business meetings.

Course MAM3080: Communication Strategies 3
Students continue to improve basic oral and written communications strategies necessary to efficient and effective management of information. Focus is on technical writing strategies and composing at the computer when preparing formal business reports and proposals.

Course MAM3090: Records Management 2
Students describe the advantages of an automated records system. Numeric, subject and geographic coding are emphasized.

Course MAM3100: Promotion: Broadcast Advertising
Students are introduced to broadcast communication channels, delivery strategies and advertising media that can be used to inform potential customers about products and services available in the marketplace.

Course MAM3120: E-commerce 3
Students will investigate strategies to gather customer information and design e-commerce Web sites that take advantage of technological advances.

COURSE CURRICULUM AND ASSESSMENT STANDARDS:
SECTION D: INTRODUCTORY LEVEL

The following pages define the curriculum and assessment standards for the introductory level of Management and Marketing.

Introductory level courses help students build daily living skills and form the basis for further learning. Introductory courses are developed for students who have no previous experience in the strand.

General outcomes define the competencies a student must demonstrate to achieve success in a course. Assessment standards define the criteria and conditions to be used for assessing the competencies defined in the general outcomes.

Specific outcomes provide a detailed framework for instruction and help students build the competencies defined in the general outcomes. Additional information and suggestions for instruction are provided in the Notes column; teachers may wish to use this space to record their ideas for instruction or student projects.

Note: Several Web sites are listed in this document. These sites are listed as a service only to identify potentially useful ideas for teaching and learning. Alberta Education is not responsible for maintaining these external sites, nor does the listing of these sites constitute or imply endorsement of their content. The responsibility to evaluate these sites rests with the user.

COURSE MAM1040: E-COMMERCE 1

Level:	Introductory	
Theme:	Marketing Systems and Strategies	
Prerequisite:	None	
Description:	Students will investigate the concept of e-commerce as a marketing strategy and design an e-commerce Web site to sell products/services.	
	Note: The e-commerce Web site that is designed may or may not be made operational.	
Parameters:	Access to a computer workstation, the Internet and word processing and Web site design software. Free or shareware packages that assist in Web site design are available.	
Supporting Courses:	INF1030 Word Processing 1, MAM1010 Management & Marketing Basics	

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• describe features, benefits and challenges influencing decisions to market online	• a report that describes:
	– features specific to an e-commerce Web site
	– benefits of marketing online
	– challenges in establishing and maintaining an e-commerce Web site, including:
	  • addressing ethical issues and privacy concerns
	  • meeting the needs of potential customers.
	
	Assessment Tool
	  Assessment Guide: E-commerce 1 (MAM1040–1)
	
	Standard
	  Rating of 2 for the applicable task in the Assessment Guide
		15

• outline the process of building an e-commerce Web site	• a report that outlines the process of researching, planning, developing, testing and publishing of an e-commerce Web site.
	
	Assessment Tool
	  Assessment Guide: E-commerce 1 (MAM1040–1)
	
	Standard
	  Rating of 2 for the applicable task in the Assessment Guide
		15

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• analyze features of effective e-commerce Web sites	• an analysis of the content and design/technical features observed in at least two e-commerce Web sites.	10

	Assessment Tool
	  Research Process: Features of Effective
	    E-commerce Web Sites (MAM1040–2)	

	Standard *All applicable sections have been completed*	
• design an e-commerce Web site to market products or services online	• a description of the proposed e-commerce Web site	50

	• a storyboard that outlines the page layout, including text, a navigational map, and:
	  – special effects, such as pictures, photographs, graphics, sound, navigation menus, bars, text links
	  – additional content, such as e-mail contact, company contacts and privacy policy	

	• the development of the Web site using available software (optional)	
	• a presentation of the e-commerce Web site that incorporates all required features and demonstrates effective principles of Web site design	
	• a summary of feedback from reviewers/clients and an outline of proposed changes to the Web site.	

	Assessment Tool
	  Assessment Task: E-commerce Web Site
	    Evaluation (MAM1040–3)	

	Standard *All applicable sections have been completed*	

COURSE MAM1040: E-COMMERCE 1 (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• apply, consistently, appropriate workstation routines	• demonstration of appropriate workstation routines. *Assessment Tool* 　　*Assessment Checklist: Workstation Routines and* 　　　　*Management (INFWRKSTN)* *Standard* 　　*Rating of:* 　　*2 – Workstation Routines* 　　*3 – File Management* 　　*2 – Time Management/Organization* 　　*3 – Professionalism*	10
• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process. *Assessment Tool* 　　*Basic Competencies Reference Guide and any* 　　　　*assessment tools noted above.*	Integrated throughout

Concept	Specific Outcomes	Notes
Features	*The student should:* • list features that are typical of e-commerce Web sites, including: – a catalogue display that lists products and/or services for sale – systems to handle orders, payments, shipping and inventory – marketing and advertising initiatives to attract and retain customers.	Components of an e-commerce Web site: • home page can include business description, logo, domain name, navigation to other pages, guest book or other customer registration options • information pages can include company information, such as contacts, location, policies on privacy and security, terms of business, "What's New" • descriptions of products/services (catalogue) • a shopping cart • shipping choices • payment choices.
Benefits	• describe the potential benefits of marketing online (e-commerce), including: – higher revenue/income potential • exposing business to wider audiences—local, national and global • expanded business networks/affiliations • reduced overall labour, communication and inventory costs – enhanced customer service—24/7 access – faster information dissemination to customers – faster information dissemination on products and marketing efforts within the company – increased good will and shareholder value.	
Challenges • Address Ethical Issues and Privacy Concerns • Meeting Needs of Potential Customers	• assess challenges to marketing online, including: – ethical issues (e.g., selling illegal items; using untrue, incomplete statements in advertising; accepting money for recommendations) – privacy concerns; e.g., managing the nature and degree of information collected on customers, selling or renting customer information to a third party without permission • profile potential customers: – age, gender, interests, occupations, income – reading, writing and hearing abilities – computer hardware/software expertise – status of computer equipment; e.g., processing speed, screen size, wireless mobile devices – connection speed to the Internet.	Wireless mobile devices: • cell phones • personal digital assistants (PDAs) • notebooks. Text only version for visually impaired and those with slow computers. Smaller version of images—loads faster on low-bandwidth connection. Text visibility should be tested on smaller monitors.

Concept	Specific Outcomes	Notes

Building an E-commerce Web Site
 	
• Research
	The student should:
	
	• research the target market and determine if potential customers are online
	
	• determine what competitors are doing and what needs to be done to compete
	
	• estimate start-up and ongoing costs (fixed and variable)
	
	• list what must be considered when deciding how to develop and manage an e-commerce Web site:
	  – expected size of Web site (such as number of pages, items in catalogue, special effects)
	  – expected traffic (estimated number of transactions, number of hits)
	  – need to connect to in-house business processes (inventory, purchasing, accounting, marketing, shipping)
	  – levels of security needed
	
	• describe alternatives for developing e-commerce Web sites:
	  – outsourcing
	  – building own Web site
	    • buy software
	    • use a programming language
		Start-up costs:
		• computer equipment
		• communicating to the Internet (Internet Service Provider)
		• URL registration
		• trademarking and patent registration
		• Web development
		  – in-house (software and staff), or
		  – outsourced.
		
		Ongoing costs:
		• service and transaction charges
		• advertising
		• staff upgrading and training
		• shipping.
		
		Examples of software packages used to develop/host e-commerce Web sites:
		• Macromedia Dreamweaver
		• Microsoft FrontPage
		• Microsoft Commerce Manager
		• Yahoo!Merchant Solutions.

• Plan the Web Site • Develop the Web Site (Optional)	• describe the Web site • storyboard all Web pages, including the entire text for each Web page, and show the navigation links • set up the background • insert text • format pages • add hyperlinks • develop forms • insert images and special effects • edit text–image interfacing	Examples of programming languages used to develop e-commerce Web sites: • Hypertext Markup Language (HTML) • Extensible Markup Language (XML) • Java, JavaScript • C++.

Concept	Specific Outcomes	Notes
Building an E-commerce Web Site (continued)	*The student should:*	
• Testing the Web Site (Optional)	• review the impact of the layout, text and special effects • test hyperlinks and navigation paths	
• Presenting the Web Site	• gather opinions and feedback on impact and effectiveness • make necessary adjustments	
• Modify, Publish, Market and Document the Web Site (Optional)	• register a domain name (URL) that: – is easy to find and remember – is reflective of the Web site's content – has a logical connection to Web site sponsor • publish pages to the Web site • market the Web site – online (search engines/directories and partnerships) – offline (news releases, stationery, advertisements) • document the Web site, by: – listing items that need updating on a regular basis or that are to be changed seasonally – creating a proposed schedule for software/hardware review.	Check availability of URLs at www.network solutions.com, or use search engines. Register a domain name at www.internic.net.

Concept	Specific Outcomes	Notes
Features of Effective E-commerce Web Sites • Content-related Features	*The student should:* • analyze the following content-related features of effective e-commerce Web sites: – the home page shows the main components of the Web site effectively – the search function allows efficient access to information – company information is included; e.g., name of company, address, telephone number, fax number, e-mail contact, list of key personnel, video of key staff person – company policies on privacy, security and terms of business are clearly stated – products/services are effectively displayed— name, code, description, price, option to buy, link to shopping cart, detailed product information – the shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes and total costs – the shopping cart provides options to delete the purchase(s), continue shopping or check out with a link to shipping choices – the shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) and there is a link to payment choices – the payment choices are clear—credit card, debit card, electronic cash – forms to gather customer information are well-designed – incentives to register are clear and attract attention – drop-down menus assist in filling out forms – additional content is offered to attract customers; e.g., detailed product/service information, frequently asked questions, "What's New," newsroom, forum, Web site tour, thank-you page, games – text is appropriate for potential customers – text is accurate—no errors in spelling, punctuation, grammar	Considerations for developing content: • present ideas in an easy-to-follow fashion (estimated viewer attention span is 10 seconds) • place most requested information in "front" of Web site, least requested in "back" • keep documents as simple as possible • use language that is appropriate for the target market.

Concept	Specific Outcomes	Notes

Features of Effective E-commerce Web Sites (continued)
 	
• Design- and Technical-related Features
	The student should:
	
	• analyze the following design- and technical-related features of effective e-commerce Web sites:
	  – the overall impact of the Web site is positive and motivating
	  – the Web site aligns with potential customers' interests and needs
	  – the pages are consistent in format, text size, font, headings and colour
	  – colour contrast helps items stand out or blend in
	  – the background is effective
	  – special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video, marquee, 3-D graphics, 3-D animation
	  – the home page provides clear links to other pages of the Web site
	  – navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, hover button, image map)
	  – navigation throughout the Web site is efficient (three or fewer "clicks")
	  – after the home page, navigation links are positioned in a standard location
	  – the organization of information is efficient (least used at "back" of Web site)
	  – the processing speed is acceptable throughout the Web site
	  – the domain name (URL) is indicative of the products/services offered
	  – viewers have the option to register and the ability to ask questions, request information and give feedback
	  – viewers have the option to control viewing choices; e.g., text only, view videos, turn off sound, enlarge/reduce picture size, customize the home page, select language.
		Static Web sites include primarily text, but they can include special features such as sound, photographs and 3-D graphics.
		
		Dynamic Web sites include special features such as animation and video and/or have interactive features; e.g., viewer registration, purchase information, e-mail inquiries connected to a database.

Concept	Specific Outcomes	Notes
Workstation Management	*The student should:* • demonstrate appropriate workstation routines: – good health and safety (posture, positioning of hardware and furniture) – security for hardware, software, supplies and personal work • demonstrate efficient and appropriate use of time and resources: – start-up procedures – organization of work area – closing procedures • apply effective decision-making strategies when using the Internet • use related terminology to describe basic protocols, processes and tools.	

COURSE CURRICULUM AND ASSESSMENT STANDARDS:
SECTION E: INTERMEDIATE LEVEL

The following pages define the curriculum and assessment standards for the intermediate level of Management and Marketing.

Intermediate level courses help students build on the competencies developed at the introductory level and focus on developing more complex competencies. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

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COURSE MAM2110: E-COMMERCE 2

Level:	Intermediate
Theme:	Marketing Systems and Strategies
Prerequisite:	MAM1040: E-commerce 1
Description:	Students will enhance their understanding of e-commerce as a marketing strategy and design an e-commerce Web site with special effects and additional content to attract customers and increase their satisfaction.
Parameters:	Access to a computer workstation, word processing and Web site design software, and the Internet. Free or shareware packages that assist in Web site design are available.
Supporting Courses:	INF1030 Word Processing 1, INF2130 Multimedia Authoring 1, INF2060 Electronic Publishing 1, ENT2030 Marketing the Venture

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
 • describe strategies that attract customers to an e-commerce Web site
	Assessment of student achievement should be based on:
	
	 • a report comparing the strategies that e-commerce Web sites use to attract customers, including:
	   – Web site improvements that incorporate additional content and add special effects
	   – providing superior customer service
	   – registering with search engines
	   – forming strategic partnerships
	   – providing secure payment systems.
	
	 Assessment Tool
	   Assessment Guide: E-commerce 2 (MAM2110–1)
	
	 Standard
	   Rating of 3 for the applicable task in the
	     Assessment Guide
		15

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• describe ethical issues, security threats and current legislation related to e-commerce	• a report that investigates examples related to an e-commerce Web site involving:
	– ethical issues
	– security threats
	– legislation and tort law.
	
	Assessment Tool
	    Assessment Guide: E-commerce 2 (MAM2110–1)
	
	Standard
	    Rating of 3 for the applicable task in the Assessment Guide
		10

• analyze features of effective e-commerce Web sites	• an analysis of the content and design/technical features observed in at least three effective e-commerce Web sites.
	
	Assessment Tool
	    Research Process: Features of Effective E-commerce Web Sites (MAM2110–2)
	
	Standard
	    All applicable sections have been completed
		15

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis

The student will:
 	
 • design an e-commerce Web site with special effects and additional content
	Assessment of student achievement should be based on:
	
	 • a description of the proposed e-commerce Web site
	
	 • a storyboard that outlines the page layout and navigation links, including:
	 – special effects, such as pictures, photographs, graphics, sound, multimedia (audio, animation), navigation menus, bars and links (text, icon, banner ads)
	 – additional content, such as e-mail contact, detailed product information for one product/service, policies for privacy and security, What's New, and five frequently asked questions
	
	 • the development of the Web site, using available software, that incorporates all required features and demonstrates effective principles of Web site design
	
	 • a test and presentation of the e-commerce Web site, including reviewers' comments
	
	 • an outline of recommended changes to the Web site
	
	 • the publishing of the e-commerce Web site, which incorporates planned changes.
	
	 Assessment Tool
	     Assessment Task: E-commerce Web Site Evaluation (MAM2110–3)
	
	 Standard
	     All applicable sections have been completed
		50

COURSE MAM2110: E-COMMERCE 2 (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• apply, consistently, appropriate workstation routines	• demonstration of appropriate workstation routines.
	
	Assessment Tool
	    Assessment Checklist: Workstation Routines and
	        Management (INFWRKSTN)
	
	Standard
	    Rating of:
	    3 – Workstation Routines
	    3 – File Management
	    3 – Time Management/Organization
	    3 – Professionalism
		10

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	    Basic Competencies Reference Guide and any
	        assessment tools noted above.
		Integrated throughout

Concept	Specific Outcomes	Notes

Strategies for Attracting Customers
 	
• Web Site Improvements
 	
• Providing Superior Customer Service
	The student should:
	
	• outline Web site improvements that encourage customers to visit the e-commerce Web site, including:
	  − additional content
	  − special effects
	  − navigation methods
	
	• identify how Web sites can provide superior customer service, including:
	  − keeping the Web site up-to-date
	  − indicating "What's New"
	  − providing detailed product information; e.g.,
	    • side-by-side charts comparing the company's products to its competitors' products
	    • a database allowing online shoppers to investigate products in depth; e.g., nutritional information, specifications, diagrams, blueprints
	    • showing products in a favourable light; e.g., animated slide shows, movie clips of products in action, links to favourable reviews in online magazines, customers' testimonials, articles
	  − providing the ability to trace the status of orders—in-house database or connect to shipper's database
	  − establishing and/or refining company policies for returns, security and privacy
	  − providing access to staff e-mail addresses to route customer questions to correct departments
	  − using mailing lists to send copies of one message to numerous customers or employees; e.g., flag problems, share good news
	  − providing incentives (added value) for customers to buy or register through the Web site; e.g., sales, discounts, quizzes, contests
	  − providing the option to customize the home page
	  − providing links to free information; e.g., current news, stock prices
		Additional content:
		• e-mail contact
		• detailed information for products/services
		• policies for privacy, security and terms of business (such as returns, credit)
		• "What's New"
		• frequently asked questions (FAQ's)
		• news releases
		• registration form.
		
		Special effects:
		• pictures
		• photographs
		• graphics
		• sound
		• audio
		• animation
		• video clips
		• 3-D graphics
		• 3-D animation.
		
		Navigation methods:
		• menus
		• bars
		• links; e.g., text, icon, hover button, image map, banner ad.

Concept	Specific Outcomes	Notes

Strategies for Attracting Customers (continued)
 	
• Registering With Search Engines
	The student should:
	
	• identify possible search engines/directories
	• list necessary steps to register the Web site with search engines and directories, including:
	  – reading individual search engine rules
	  – entering the Web site address at the search engines of choice
	  – entering Web site details
	  – submitting the Web site (doorway page)
	  – keeping records of the submission
	
	• outline strategies to help place the Web site in a high ranking order within search engines, including:
	  – selecting keywords/phrases that:
	    • people are likely to use in searching for the Web site
	    • indicate why the Web site is unique
	  – arranging keywords/phrases in order of importance (Meta tags)
	  – using keywords in the title and description (first 200 words)
	  – avoiding blatant self-promotion
	  – not repeating keywords (using synonyms and complementary words/phrases and plurals)
	  – creating several descriptions of the Web site (fewer than 5, 25, 50 words)
	  – forming strategic partnerships with complementary Web sites
		Note: Typically, only the first 30–50 listings are viewed by customers.
		
		Doorway pages, used by search engines, indicate a Web site's:
		• title
		• description
		• keywords.

Concept	Specific Outcomes	Notes
	The student should:	
Strategies for Attracting Customers (continued)		

• Forming Strategic Partnerships	• describe benefits of strategic partnerships, including that the partner:
	  – can offer quality information and/or online services that complement the products/services on the e-commerce Web site
	  – can provide high quality/credible information on the products/services available through the e-commerce Web site
	  – can generate income based on hits and/or purchases
	  – is willing to place advertisements on its Web site (usually free)
	
	• list various ways that an e-commerce business can advertise on partners' Web sites; e.g., banner ads, name identifiers
		Portals: connections to a wide range of other Web sites (horizontal).
		
		Vortals: portal focused on a vertical market; e.g., health, travel, gourmet food, pets.
		
		To identify most visited Web sites, go to www.comscore.com.
		
		Identify potential global partners by researching information on products manufactured in different countries.

• Providing Secure Payment Systems	• list methods of paying for purchases online, including:
	  – credit and debit cards
	  – electronic cash (e-cheques, smart card, electronic wallet)
	
	• chart advantages and disadvantages of different arrangements for handling payment systems securely, such as:
	  – terminal identification (TID)
	  – digital certificates
	  – digital signatures
	  – encryption
	  – protocols for secure information transfer through the Internet, such as:
	    • Netscape Secure Sockets Layer (SSL)
	    • Secure (S-HTTP).
		An encryption program codes normal text, before being sent over the Internet, into cipher text; then it decodes the text, using a decryption program, on arrival.
		
		The level of security of the encryption program depends on the size of the key used.
		
		Pretty Good Privacy (PGP) www.pgp.com provides encryption for Web sites.

Concept	Specific Outcomes	Notes

Ethical Issues and Security Threats Related to E-commerce	*The student should:*
	
	• outline examples of how an e-commerce Web site could deal with ethical issues and other challenges, such as:
	  – unsolicited mail
	  – online activism
	  – access for people with disabilities
	
	• describe security threats, such as the following and potential solutions:
	  – virus attacks
	  – password guessing
	  – credit card fraud
	  – spoofing (intruder appears to be someone else)
	  – denial of service attacks (crashing system, using up resources, flooding network with bogus requests)
	  – sniffing (grabbing passwords by monitoring network traffic)
	  – operating system exploitation (bugs or known flaws that allow entry).
		Canadian legislation relating to the Internet and e-commerce:
		• *Personal Information and Electronic Documents Act* (PIPEDA) laws.justice.gc.ca/en/p-8.6/93196.html
		• *Privacy Act* laws.justice.gc.ca/en/P-21/index.html
		• *Copyright Act* laws.justice.gc.ca/en/C-42/index.html
		• *Competition Act* laws.justice.gc.ca/en/C-34/index.html
		• *Telecommunications Act* laws.justice.gc.ca/en/T-3.4/index.html

Legislation and Tort Law Related to E-commerce	• summarize key features of legislation and tort law that impact e-commerce, including:
	  – digital signatures
	  – electronic contracts
	  – false advertising
	  – intellectual property law
	  – copyright
	  – patents
	  – trademarks and domain registration
	  – misrepresentation
	  – licensing
	  – defamation
	  – bait advertising
	  – endorsements and testimonials
	  – guarantees and warranties.
		Alberta legislation:
		• *Personal Information Act* www.psp.gov.ab.ca
		• *Freedom of Information and Protection of Privacy Act* http://www.qp.gov.ab.ca/documents/acts/F25.cfm
		• Alberta Regulation 81/2001 Internet Sales contract Regulation (*Fair Trading Act*)
		
		For further links to legislation, refer to the Canadian IT Law Association www.it-can.ca/en/resources.html

Concept	Specific Outcomes	Notes

Features of Effective E-commerce Web Sites
 	
• Content-related Features
	The student should:
	
	• analyze the following content-related features of effective e-commerce Web sites:
	  – the home page shows the main components of the Web site effectively
	  – the search function allows efficient access to information
	  – company information is included; e.g., name of company, address, telephone number, fax number, e-mail contact, list of key personnel, video of key staff person
	  – company policies on privacy, security and terms of business are clearly stated
	  – products/services are effectively displayed—name, code, description, price, option to buy, link to shopping cart, detailed product information
	  – the shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes and total costs
	  – the shopping cart provides options to delete the purchase(s), continue shopping or check out with a link to shipping choices
	  – the shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) and there is a link to payment choices
	  – the payment choices are clear—credit card, debit card, electronic cash
	  – forms to gather customer information are well-designed
	  – incentives to register are clear and attract attention
	  – drop-down menus assist in filling out forms
	  – additional content is offered to attract customers; e.g., detailed product/service information, frequently asked questions, "What's New," newsroom, forum, Web site tour, thank-you page, games
	  – text is appropriate for potential customers
	  – text is accurate—no errors in spelling, punctuation, grammar
		Considerations for developing content:
		• present ideas in an easy-to-follow fashion (estimated viewer attention span is 10 seconds)
		• place most requested information in "front" of Web site, least requested in "back"
		• keep documents as simple as possible
		• use language that is appropriate for the target market.

Concept	Specific Outcomes	Notes

Features of Effective E-commerce Web Sites (continued)
 	
• Design- and Technical-related Features
	The student should:
	
	• analyze the following design- and technical-related features of effective e-commerce Web sites:
	  – the overall impact of the Web site is positive and motivating
	  – the Web site aligns with potential customers' interests and needs
	  – the pages are consistent in format, text size, font, headings and colour
	  – colour contrast helps items stand out or blend in
	  – the background is effective
	  – special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video, marquee, 3-D graphics, 3-D animation
	  – the home page provides clear links to other pages of the Web site
	  – navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, hover button, image map)
	  – navigation throughout the Web site is efficient (three or fewer "clicks")
	  – after the home page, navigation links are positioned in a standard location
	  – the organization of information is efficient (least used at "back" of Web site)
	  – the processing speed is acceptable throughout the Web site
	  – the domain name (URL) is indicative of the products/services offered
	  – viewers have the option to register and the ability to ask questions, request information and give feedback
	  – viewers have the option to control viewing choices; e.g., text only, view videos, turn off sound, enlarge/reduce picture size, customize the home page, select language.
		Components of an E-commerce Web Site:
		• home page can include business description, logo, domain name, navigation to other pages, guest book or other customer registration options
		• information pages can include company information, such as contacts, location, policies on privacy and security, terms of business, "What's New"
		• descriptions of products/services (catalogue)
		• a shopping cart
		• shipping choices
		• payment choices.
		
		Static Web sites include primarily text, but they can include special features such as sound, photographs and 3-D graphics.
		
		Dynamic Web sites include special features such as animation and video and/or have interactive features; e.g., viewer registration, purchase information, e-mail inquiries connected to a database.

COURSE MAM2110: E-COMMERCE 2 (continued)

Concept	Specific Outcomes	Notes
Process of Building an E-commerce Web Site	*The student should:* • complete the process of building an e-commerce Web site, by: 　– planning the Web site 　– developing the Web site, including: 　　• content-related features 　　• design- and technical-related features 　– testing and presenting the Web site 　– modifying and publishing the Web site.	A detailed list of tasks to build an e-commerce Web site is outlined in *Assessment Task: E-commerce Web Site Evaluation (MAM2110–3).*
Workstation Management	• apply efficient workstation positions and routines that encourage: 　– good health and safety (posture, positioning of hardware and furniture) 　– security for hardware, software, supplies and personal work • demonstrate efficient and appropriate use of time and resources: 　– start-up procedures 　– organization of work area 　– closing procedures • apply effective decision-making strategies when using the Internet • use related terminology to describe basic protocols, processes and tools.	

COURSE CURRICULUM AND ASSESSMENT STANDARDS:
SECTION F: ADVANCED LEVEL

The following pages define the curriculum and assessment standards for the advanced level of Management and Marketing.

> Advanced level courses demand a higher level of expertise and help prepare students for entry into the workplace or a related post-secondary program.

Note: Several Web sites are listed in this document. These sites are listed as a service only to identify potentially useful ideas for teaching and learning. Alberta Education is not responsible for maintaining these external sites, nor does the listing of these sites constitute or imply endorsement of their content. The responsibility to evaluate these sites rests with the user.

COURSE MAM3120: E-COMMERCE 3

Level: Advanced

Theme: Marketing Systems and Strategies

Prerequisite: MAM2110: E-commerce 2

Description: Students will investigate strategies to gather customer information and design e-commerce Web sites that take advantage of technological advances.

Parameters: Access to a computer workstation, word processing and Web site design software, and the Internet. Free or shareware packages that assist in Web site design are available.

Supporting Courses: INF1030 Word Processing 1, INF2130 Multimedia Authoring 1, INF2060 Electronic Publishing 1, ENT2030 Marketing the Venture

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• research the challenges of obtaining customer information	• a report that:
	  – lists ways to obtain customer data (data mining)
	  – outlines possible uses of customer data
	  – outlines features to include in a relational database and methods of ensuring accurate data entry (field properties)
	  – describes options to obtain database software
	  – describes the use of cookies
	  – provides a design of a registration form and a list of possible incentives for customers to register.
	
	Assessment Tool
	    Assessment Guide: E-commerce 3 (MAM3120–1)
	
	Standard
	    Rating of 3 for the applicable task in the Assessment Guide
		10

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• research financial considerations when developing and maintaining an e-commerce Web site	• a report that:
	  – researches the costs and benefits of different methods of publishing an e-commerce Web site
	  – lists potential income-generating opportunities
	  – identifies technological advances in Web site development.
	
	Assessment Tool
	    Assessment Guide: E-commerce 3 (MAM3120–1)
	
	Standard
	    Rating of 3 for the applicable task in the Assessment Guide
		10

• analyze features of effective e-commerce Web sites	• an analysis of the content and design/technical features observed in at least three award-winning e-commerce Web sites.
	
	Assessment Tool
	    Research Process: Features of Effective E-commerce Web Sites (MAM3120–2)
	
	Standard
	    All applicable sections have been completed
		10

COURSE MAM3120: E-COMMERCE 3 (continued)

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	
• design two or more e-commerce Web sites that obtain customer information	• the descriptions of each of the proposed e-commerce Web sites	60

	• the storyboards for each of the e-commerce Web sites that outline the page layout and navigation links, including:
	  – special effects, such as pictures, photographs, graphics, sound, multimedia (audio, animation), 3-D graphics, 3-D animation, navigation menus, bars, links (text, icon, hover button, image map, banner ad) and video of key staff person
	  – additional content, such as e-mail contact; detailed product information for four products/services; policies for privacy, security and terms of business; What's New; ten frequently asked questions; news release; and registration form, with incentives	

	• the development of the Web sites, using available software, that incorporates all required features and demonstrates effective principles of Web site design	
	• a test and presentation of each of the e-commerce Web sites, including reviewers' comments	
	• an outline of recommended changes for each of the Web sites	
	• the modifying, publishing and documenting of the e-commerce Web sites.	
	Assessment Tool *Assessment Task: E-commerce Web Site Evaluation (MAM3120–3)*	
	Standard *All applicable sections have been completed*	

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• apply, consistently, appropriate workstation routines	• demonstration of appropriate workstation routines.
	
	Assessment Tool
	    Assessment Checklist: Workstation Routines
	       and Management (INFWRKSTN)
	
	Standard
	    Rating of:
	    3 – Workstation Routines
	    3 – File Management
	    3 – Time Management/Organization
	    3 – Professionalism
		10

• demonstrate basic competencies.	• observations of individual effort and interpersonal interaction during the learning process.
	
	Assessment Tool
	    Basic Competencies Reference Guide and any
	       assessment tools noted above.
		Integrated throughout

Concept	Specific Outcomes	Notes

Data Mining	*The student should:*
	
	• identify methods of obtaining (mining) customer information, including geographic, demographic, psychographic and behavioural information:
	  – give customers the choice to register in a guest book
	  – gather data that comes in when a customer places an order (cookies)
	  – summarize e-mail messages from customers and distribute to in-house departments
	  – count visitor hits on a Web site and on individual pages (ISP may offer this service for free)
	  – use a log to analyze what users value most on your Web site, and identify if there are any navigational problems
	
	• outline possible uses of customer data, such as:
	  – greeting customers by name
	  – modifying the information presented to customers, and providing recommended buying lists and information on sales and discounts, based on customers' shopping histories
	  – providing personal shopping representatives to assist customers.
		Customer Information (data mining):
		• Geographic: region, city, urban, suburban, rural
		• Demographic: age, income, education, occupation, gender, marital status, household size, ethnic background
		• Psychographic: lifestyles, activities, interests, opinions
		• Behavioural: occasion for use, benefits sought, usage rate, degree of loyalty.
		
		ISP (Internet Service Provider).
		
		Recent Marketing Strategies:
		• "Push" technology
		• Web skins.
		
		Note: Visible counts of hits on a Web site may or may not be advantageous.

Using Databases to Gather Information	• identify various databases that can be obtained to support:
	  – customer information
	  – order tracking
	  – e-mail addresses
	  – product-related or technical-related information
	
	• list data fields and field properties to include in a registration form; e.g., geographic, demographic, psychographic.
		Databases can be:
		• part of hosting software
		• purchased
		• obtained as freeware.

COURSE MAM3120: E-COMMERCE 3 (continued)

Concept	Specific Outcomes	Notes
Using Cookies	*The student should:* • describe how cookies work to identify customers and their habits and outline information that can/cannot be retrieved.	A cookie is a data file stored on the customer's hard drive that records the customer's activities on each visit to the Web site.

Designing a Registration Form	• design a registration form to obtain customer information that contains:
	  – text entry boxes
	  – form validation; e.g., field masks that limit type of entry or space for text when applicable
	  – hidden fields displayed with an asterisk (*)
	  – check boxes to indicate one or more chosen options
	  – pop-up menus and scrolling menus to provide choices
	  – plain push buttons or more creative buttons; e.g., SUBMIT to send form data to the server, RESET to clear all form fields.
		Use table structure to align components of the registration form.

Incentives to Complete Registration Form	• list possible incentives to motivate the customer to register; e.g., free items, discounts, rewards, contests.	

Concept	Specific Outcomes	Notes

Financial Considerations
 	
• Costs and Benefits of Developing and Maintaining an E-commerce Web Site
	The student should:
	
	• compare different ways of hosting e-commerce Web sites in terms of degree of control of operations and improvements, costs (development and transaction), and processing speed:
	  – Outsourced hosting
	    • no charge with limited options
	    • no charge in exchange for placing advertisements
	    • fee as part of other telecommunication services; e.g., telephone, cable services
	    • fee for limited services; e.g., software package used to develop/host e-commerce Web site
	    • fee for comprehensive services; e.g., connections to in-house business systems, Web space added to other services
	  – Web hosting on own Web site
	    • hire professionals to design and program
	    • purchase software—build and maintain Web site (possibly outsource data management and secure payments system)
	    • program your own site—full control of operations
		Operational costs can be based on paying a flat fee, a fee per transaction and/or percentage of total sale (1.5% – 9%).
		
		Examples of software packages used to develop/host e-commerce Web sites:
		• Macromedia Dreamweaver
		• Microsoft FrontPage
		• Microsoft Commerce Manager
		• Yahoo!Merchant Solutions.
		
		Examples of programming languages include Java, C++, JavaScript, VBScript, Perl/CGI, HTML, SML, XSL, ASP and DHTML.
		
		Factors Affecting Processing Speed:
		Customer
		• speed of local system
		• speed of browser
		• user's connection speed.
		Network
		• amount of data sent (text, images)
		• optimizing graphics to reduce bandwidth requirements
		• network outages
		• latency from extreme physical distance
		• effects of protocols like TCP/IP or HTTP.
		E-commerce Web site
		• speed of the server: CPU, disk drive
		• load on the server
		• traffic caused by other server processes
		• traffic caused by other Web users.

• Potential Income-generating Opportunities	• list potential income-generating opportunities, such as:
	  – sales of goods and services
	  – partnerships
	  – auctions (general consumer, specialty consumer)	

• Technological Advances	• identify technological advances in e-commerce Web site development, including:
	  – connection options with customer, network, e-commerce Web site and browser
	  – software
	  – hardware
	  – wireless mobile devices
	  – security and privacy systems.	

Concept	Specific Outcomes	Notes
Features of Effective E-commerce Web Sites • Content-related Features	*The student should:* • analyze the following content-related features of effective e-commerce Web sites: – the home page shows the main components of the Web site effectively – the search function allows efficient access to information – company information is included; e.g., name of company, address, telephone number, fax number, e-mail contact, list of key personnel, video of key staff person – company policies on privacy, security and terms of business are clearly stated – products/services are effectively displayed— name, code, description, price, option to buy, link to shopping cart, detailed product information – the shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes and total costs – the shopping cart provides options to delete the purchase(s), continue shopping or check out with a link to shipping choices – the shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) and there is a link to payment choices – the payment choices are clear—credit card, debit card, electronic cash – forms to gather customer information are well-designed – incentives to register are clear and attract attention – drop-down menus assist in filling out forms – additional content is offered to attract customers; e.g., detailed product/service information, frequently asked questions, "What's New," newsroom, forum, Web site tour, thank-you page, games – text is appropriate for potential customers – text is accurate—no errors in spelling, punctuation, grammar	Considerations for developing content: • present ideas in an easy-to-follow fashion (estimated viewer attention span is 10 seconds) • place most requested information in "front" of Web site, least requested in "back" • keep documents as simple as possible • use language that is appropriate for the target market.

Concept	Specific Outcomes	Notes

Features of Effective E-commerce Web Sites (continued)
 	
• Design- and Technical-related Features
	The student should:
	
	• analyze the following design- and technical-related features of effective e-commerce Web sites:
	  – the overall impact of the Web site is positive and motivating
	  – the Web site aligns with potential customers' interests and needs
	  – the pages are consistent in format, text size, font, headings and colour
	  – colour contrast helps items stand out or blend in
	  – the background is effective
	  – special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video, marquee, 3-D graphics, 3-D animation
	  – the home page provides clear links to other pages of the Web site
	  – navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, hover button, image map)
	  – navigation throughout the Web site is efficient (three or fewer "clicks")
	  – after the home page, navigation links are positioned in a standard location
	  – the organization of information is efficient (least used at "back" of Web site)
	  – the processing speed is acceptable throughout the Web site
	  – the domain name (URL) is indicative of the products/services offered
	  – viewers have the option to register and the ability to ask questions, request information and give feedback
	  – viewers have the option to control viewing choices; e.g., text only, view videos, turn off sound, enlarge/reduce picture size, customize the home page, select language.
		Components of an E-commerce Web Site:
		• home page can include business description, logo, domain name, navigation to other pages, guest book or other customer registration options
		• information pages can include company information, such as contacts, location, policies on privacy and security, terms of business, "What's New"
		• descriptions of products/services (catalogue)
		• a shopping cart
		• shipping choices
		• payment choices.

Concept	Specific Outcomes	Notes
	The student should:	
Concept	Specific Outcomes	Notes

Process of Building E-commerce Web Sites	*The student should:*
	• complete the process of building two or more e-commerce Web sites, by:
	  − planning the Web sites
	  − developing the Web sites, including:
	    • content-related features
	    • design- and technical-related features
	  − testing and presenting the Web sites
	  − modifying, publishing and documenting the Web sites.
		A detailed list of tasks to build an e-commerce Web site is outlined in *Assessment Task: E-commerce Web Site Evaluation (MAM3120–3).*

Workstation Management	• apply efficient workstation positions and routines that encourage:
	  − good health and safety (posture, positioning of hardware and furniture)
	  − security for hardware, software, supplies and personal work
	
	• demonstrate efficient and appropriate use of time and resources:
	  − start-up procedures
	  − organization of work area
	  − closing procedures
	
	• apply effective decision-making strategies when using the Internet
	
	• use related terminology to describe basic protocols, processes and tools.	

ASSESSING STUDENT ACHIEVEMENT IN CTS

The CTS assessment standards assess two basic forms of competency:

- What can a student *do*?
  - **make** a product (e.g., wood bowl, report, garment)
  - **demonstrate** a process
    - strand-related competencies (e.g., keyboarding, hair cutting, sewing techniques, lab procedures)
    - basic competencies (e.g., resource use, safety procedures, teamwork).

- What does a student *know*?
  - knowledge base needed to demonstrate a competency (link theory and practice).

CTS Defines *Summative* Assessment Standards

The assessment standards and tools defined for the CTS courses, referenced in Sections D, E and F of this Guide, focus on the final (or summative) assessment of student achievement.

Assessment throughout the learning period (formative assessment) will continue to evaluate how students are progressing. Teachers direct and respond to students' efforts to learn—setting and marking tasks and assignments, indicating where improvement is needed, sending out interim reports, congratulating excellence, etc.

Teachers will decide which instructional and assessment strategies to apply during the formative learning period. As formative and summative assessment are closely linked, some teachers may wish to modify the tools included in this section to use during the instructional process. Teachers may also develop their own summative assessment tools as long as the standards are consistent with the minimum expectations outlined by Alberta Learning.

Grading and Reporting Student Achievement

When a student can demonstrate ALL of the exit-level competencies defined for the course (course learner expectations), the teacher will designate the course as "successfully completed." The teacher will then use accepted grading practices to determine the percentage grade to be given for the course—a mark not less than 50%.

The time frame a teacher allows a student to develop the exit-level competency is a local decision. NOTE: The *Guide to Education: ECS to Grade 12* specifies that students <u>must have access to 25 hours of instruction</u> for each credit. Students may, however, attain the required competencies in less time and may proceed to other courses.

Teachers are encouraged to consult their colleagues to ensure grading practices are as consistent as possible. Further information about assessing and reporting student achievement in CTS is provided in the *CTS Manual for Administrators, Counsellors & Teachers* (Assessing Student Achievement).

Components of Assessment Standards in CTS

The following components are included in each course:

- **general outcomes** (in the shaded left column of the course) define the exit-level competencies students are expected to achieve to complete a course. Each general outcome defines and describes critical behaviours that can be measured and observed. The student must meet the standard specified for **ALL** general outcomes within a course to be successful.

- **suggested emphasis** (in the right column of the course) provides a guideline for the relative significance of each general outcome and can be used to organize for instruction.

STUDENT: _____   TITLE OF COMMERCIAL: _____

STANDARD IS 2 IN EACH APPLICABLE TASK

Rating Scale

The student:

4	Exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
3	Meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
2	Meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
1	Meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
0	Has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

REFLECTIONS/COMMENTS

Observations of Student	CRITERIA
	The student:
4 3 2 1 0	**Storyboard** ☐ illustrates of each shot with dialogue (illustration should convey what the shots are about) ☐ describes type and length of shot ☐ includes special instructions for effects when producing the shot
4 3 2 1 0	**Content of Commercial** ☐ originality – creative, fresh, clever ☐ impact – the ad is believable ☐ attracts attention by a strong opening ☐ builds interest by focusing on a single big idea (make every shot count) ☐ arouses desire by promoting customer benefits (emotional involvement, repeat major points) ☐ induces action by creating an urgency to buy now and/or gives address, phone number, hours of operation
4 3 2 1 0	**Technical Excellence** ☐ commercial does not exceed 15-, 30- or 60-second assigned air time ☐ visuals and audio are clear ☐ editing is evident, creates an illusion of reality by cutting out the dead parts; presents interesting action-oriented shots ☐ smoothness or continuity exists throughout ☐ customers can easily identify the product being advertised
4 3 2 1 0	**Oral Presentation** ☐ explains objective, target audience and buying motives ☐ justifies time slot ☐ describes how the AIDA concept was used in the production of the commercial

Name: _____

1. The student prepares a report that describes the features, benefits and challenges influencing decisions to market online. The report is technically acceptable (format, grammar, spelling, punctuation) and includes: ☐ features specific to an e-commerce Web site ☐ benefits of marketing online ☐ challenges in establishing and maintaining an e-commerce Web site, including: • addressing ethical issues and privacy concerns • meeting the needs of potential customers.	2. The student prepares a report that outlines the process of researching, planning, developing, testing and publishing an e-commerce Web site. The report is technically acceptable (format, grammar, spelling, punctuation).
Standard (2)	*Standard (2)*

Rating Scale	4 – All requirements are met in an exemplary manner. Writing and format is of high standard.	3 – All requirements, but one, have been met in a satisfactory manner. Writing and format is of high standard.	2 – All requirements, but two, have been met in a satisfactory manner. Writing and format is of acceptable standard.	1 – All requirements, but three, have been met in a satisfactory manner. Writing and format is of acceptable standard.	0 – The minimum number of requirements have not been met in a satisfactory manner.

Research Process: Features of Effective E-commerce Web Sites		MAM1040–2

Student:		Web Site Reviewed (URL):	
Rating		**Content-related Features**	**Comments**
	1.	Home page shows the main components of the Web site effectively.	
	2.	Search function allows efficient access to information.	
	3.	Company information is included; e.g., name of company, address, telephone number, fax number, e-mail contact,l ist of key personnel, video of key staff person.	
	4.	Company policies on privacy, security and terms of business are clearly stated.	
	5.	Products/services are effectively displayed—name,c ode, description, price, option to buy, link to shopping cart, detailed product information.	
	6.	Shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes,t otal costs.	
	7.	Shopping cart provides option to delete purchase(s), continue shopping or check out with link to shipping choices.	
	8.	Shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) with link to payment choices.	
	9.	Payment choices are clear—credit card, debit card, electronic cash.	
	10.	Forms to gather customer information are well-designed.	
	11.	Incentives to register are clear and attract attention.	
	12.	Drop-down menus assist in filling out forms.	
	13.	Additional content is offered to attract customers; e.g., detailed product/service information, frequently asked questions, "What's New," newsroom,f orum, Web site tour, thank-you page, games.	
	14.	Text is appropriate for potential customers.	
	15.	Text is accurate—no errors in spelling, punctuation, grammar.	
		Design- and Technical-related Features	
	16.	Overall impact of Web site is positive and motivating.	
	17.	Web site aligns with potential customers' interests and needs.	
	18.	Pages are consistent in format,t ext size, font, headings, colour.	
	19.	Colour contrast helps items stand out or blend in.	
	20.	Background is effective.	
	21.	Special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio,a nimation, video, marquee, 3-D graphics, 3-D animation.	
	22.	Home page provides clear links to other pages of the Web site.	
	23.	Navigation methods are effective; e.g., menus, bars,l inks (text, icon, banner ad, hover button, image map).	
	24.	Navigation throughout the Web site is efficient (three or fewer "clicks").	
	25.	After home page, navigation links are positioned in a standard location.	
	26.	Organization of information is efficient (least used at "back" of Web site).	
	27.	Processing speed is acceptable throughout the Web site.	
	28.	Domain name (URL) is indicative of the products/services offered.	
	29.	Viewers have the option to register and the ability to ask questions, request information and give feedback.	
	30.	Viewers have the option to control viewing choices; e.g., text only, view videos, turn off sound, enlarge/reduce picture size, customize the home page, select language.	

Rating: 1 – low effectiveness   5 – high effectiveness   X – not available/in place

Assessment Task: E-commerce Web Site Evaluation	MAM1040–3

Student: Web Site (URL):

Planning the E-commerce Web Site

☐ A description of the proposed e-commerce Web site, including:
- the company name, potential domain names (URLs)
- potential customers, image to be portrayed
- product/service line
- method of Web site publication

☐ Approved storyboard for each page of the Web site, including design and text for each component of the Web site that indicates any photographs, sound, graphics, borders and pictures to be included

Content-related Features

☐ Home page shows main components of the Web site and includes logo, description of Web site, links to other components in Web site and an e-mail connection

☐ Company information includes name of company, address, telephone and fax number, e-mail contact

☐ Company policies on privacy are clearly stated

☐ Products/services are effectively displayed—name, code, description, price, option to buy, link to shopping cart

☐ Shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes, total costs

☐ Shopping cart provides option to delete purchase(s), continue shopping or check out, link to shipping choices

☐ Shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) with link to payment choice

☐ Payment choices are clear—credit cards, electronic cash (e.g., e-cheque, smart card, electronic wallet)

☐ *Additional content to attract customers; e.g., detailed product/service information, at least five frequently* asked *questions, "What's New," a news release, newsroom, forum, Web site tour, thank-you page, games*

☐ Text is appropriate for potential customers

☐ Text is accurate—no errors in spelling, punctuation, grammar

Design- and Technical-related Features

☐ Overall impact of e-commerce Web site is positive and motivating

☐ Web site aligns with potential customers' interests and needs

☐ Pages are consistent in format, text size, font, headings, colour

☐ Colour contrast helps items stand out or blend in

☐ Background is effective

☐ Special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders

☐ Home page provides clear links to other pages of the Web site

☐ Navigation methods are effective; e.g., menus, bars, links (text, icon, *banner ad, hover button, image map*)

☐ Navigation throughout Web site is efficient (three or fewer "clicks")

☐ After home page, navigation links are positioned in a standard location

☐ Organization of information is effective (least used at "back" of Web site)

☐ *Processing speed is acceptable throughout the Web site*

☐ Domain name (URL) is indicative of the products/ services offered

☐ Viewers have option to register and ability to ask questions, request information and give feedback

☐ Viewers have option to control viewing; e.g., text only, *turn off sound, enlarge/reduce picture size*

Testing and Presenting the Web Site

☐ *Testing is completed using various browsers and operating systems to check speed of loading and operation and to debug the Web site using available editors*

☐ Presentation of the e-commerce Web site to clients and other reviewers includes Web site purpose, potential customers, organizational structure and key features

☐ Reviewers' comments regarding strengths of, and areas for improvement to, the Web site are recorded

Modifying and Publishing the Web Site

☐ Proposed changes to the e-commerce Web site are outlined

☐ The e-commerce Web site is published

Note: Items shown in *italics* are <u>not required</u> to be included in the e-commerce Web site design to meet the minimum requirements for this learning outcome.

Name: _____

1. The student prepares a report comparing the strategies that e-commerce Web sites use to attract customers. The report is technically acceptable (format, grammar, spelling, punctuation) and includes mention of the following strategies: ☐ incorporating additional content and adding special effects ☐ providing superior customer service ☐ registering with search engines ☐ forming strategic partnerships ☐ providing secure payment systems.	2. The student prepares a report that investigates examples related to an e-commerce Web site involving: ☐ ethical issues ☐ security threats ☐ legislation and tort law.
Standard (2)	*Standard (3)*

Rating Scale	4 – All requirements are met in an exemplary manner. Writing and format is of high standard.	3 – All requirements, but one, have been met in a satisfactory manner. Writing and format is of high standard.	2 – All requirements, but two, have been met in a satisfactory manner. Writing and format is of acceptable standard.	1 – All requirements, but three, have been met in a satisfactory manner. Writing and format is of acceptable standard.	0 – The minimum number of requirements have not been met in a satisfactory manner.

Student: **Web Site Reviewed (URL):**

Rating	Content-related Features	Comments
	1. Home page shows the main components of the Web site effectively.	
	2. Search function allows efficient access to information.	
	3. Company information is included; e.g., name of company, address, telephone number, fax number, e-mail contact, list of key personnel, video of key staff person.	
	4. Company policies on privacy, security and terms of business are clearly stated.	
	5. Products/services are effectively displayed—name, code, description, price, option to buy, link to shopping cart, detailed product information.	
	6. Shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes, total costs.	
	7. Shopping cart provides option to delete purchase(s), continue shopping or check out with link to shipping choices.	
	8. Shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) with link to payment choices.	
	9. Payment choices are clear—credit card, debit card, electronic cash.	
	10. Forms to gather customer information are well-designed.	
	11. Incentives to register are clear and attract attention.	
	12. Drop-down menus assist in filling out forms.	
	13. Additional content is offered to attract customers; e.g., detailed product/service information, frequently asked questions, "What's New," newsroom, forum, Web site tour, thank-you page, games.	
	14. Text is appropriate for potential customers.	
	15. Text is accurate—no errors in spelling, punctuation, grammar.	
	Design- and Technical-related Features	
	16. Overall impact of Web site is positive and motivating.	
	17. Web site aligns with potential customers' interests and needs.	
	18. Pages are consistent in format, text size, font, headings, colour.	
	19. Colour contrast helps items stand out or blend in.	
	20. Background is effective.	
	21. Special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video, marquee, 3-D graphics, 3-D animation.	
	22. Home page provides clear links to other pages of the Web site.	
	23. Navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, hover button, image map).	
	24. Navigation throughout the Web site is efficient (three or fewer "clicks").	
	25. After home page, navigation links are positioned in a standard location.	
	26. Organization of information is efficient (least used at "back" of Web site).	
	27. Processing speed is acceptable throughout the Web site.	
	28. Domain name (URL) is indicative of the products/services offered.	
	29. Viewers have the option to register and the ability to ask questions, request information and give feedback.	
	30. Viewers have the option to control viewing choices; e.g., text only, view videos, turn off sound, enlarge/reduce picture size, customize the home page, select language.	

Rating: 1 – low effectiveness   5 – high effectiveness   X – not available/in place

Assessment Task: E-commerce Web Site Evaluation	MAM2110–3

Student: **Web Site (URL):**

Planning the E-commerce Web Site

☐ A description of the proposed e-commerce Web site, including: • the company name, potential domain names (URLs) • potential customers, image to be portrayed • product/service line • method of Web site publication	☐ Approved storyboard for each page of the Web site, including design and text for each component of the Web site that indicates any photographs, sound, graphics, borders, pictures, audio, animation and video to be included

Developing the Web Site—Content-related Features

☐ Home page shows main components of the Web site and includes logo, description of Web site, links to other components in Web site, an e-mail connection, an ad from a partner and highlights for one product/service ☐ Company information includes name of company, address, telephone and fax number, e-mail contact, list of key personnel ☐ Company policies on privacy and security are clearly stated ☐ Products/services are effectively displayed—name, code, description, price, option to buy, link to shopping cart, detailed information on at least one product/service ☐ Shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes, total costs ☐ Shopping cart provides option to delete purchase(s), continue shopping or check out, link to shipping choices	☐ Shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) with link to payment choice ☐ Payment choices are clear—credit cards, electronic cash (e.g., e-cheque, smart card, electronic wallet) ☐ Additional content to attract customers; e.g., detailed product/service information, at least five frequently asked questions, "What's New," *a news release, newsroom, forum, Web site tour, thank-you page, games* ☐ Text is appropriate for potential customers ☐ Text is accurate—no errors in spelling, punctuation, grammar

Developing the Web Site—Design- and Technical-related Features

☐ Overall impact of e-commerce Web site is positive and motivating ☐ Web site aligns with potential customers' interests and needs ☐ Pages are consistent in format, text size, font, headings, colour ☐ Colour contrast helps items stand out or blend in ☐ Background is effective ☐ Special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video ☐ Home page provides clear links to other pages of the Web site ☐ Navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, *hover button, image map*)	☐ Navigation throughout Web site is efficient (three or fewer "clicks") ☐ After home page, navigation links are positioned in a standard location ☐ Organization of information is effective (least used at "back" of Web site) ☐ Processing speed is acceptable throughout the Web site ☐ Domain name (URL) is indicative of the products/ services offered ☐ Viewers have option to register and ability to ask questions, request information and give feedback ☐ Viewers have option to control viewing; e.g., text only, turn off sound, *enlarge/reduce picture size*

Testing and Presenting the Web Site

☐ Testing is completed using various browsers and operating systems to check speed of loading and operation and to debug the Web site using available editors	☐ Presentation of the e-commerce Web site to clients and other reviewers includes Web site purpose, potential customers, organizational structure and key features ☐ Reviewers' comments regarding strengths of, and areas for improvement to, the Web site are recorded

Modifying and Publishing the Web Site

☐ Proposed changes to the e-commerce Web site are outlined ☐ Recommended changes and enhancements are incorporated	☐ The e-commerce Web site is published

Note: Items shown in *italics* are <u>not required</u> to be included in the e-commerce Web site design to meet the minimum requirements for this learning outcome.

Name: _____

1 The student prepares a report that researches the challenges of obtaining customer information. The report is technically acceptable (format, grammar, spelling, punctuation) and:	2. The student prepares a report that investigates financial considerations when developing and maintaining an e-commerce Web site. The report is technically acceptable (format, grammar, spelling, punctuation) and:
☐ lists ways to obtain and use customer data (data mining)	☐ researches the costs and benefits of different methods of publishing an e-commerce Web site
☐ outlines features to include in a relational database and methods of ensuring accurate data entry (field properties)	☐ lists potential income-generating opportunities
☐ describes options to obtain database software	☐ identifies technological advances in Web site development.
☐ describes the use of cookies	
☐ provides a design of a registration form and a list of possible incentives for customers to register.	
Standard (3)		*Standard (3)*	

Rating Scale	4 – All requirements are met in an exemplary manner. Writing and format is of high standard.	3 – All requirements, but one, have been met in a satisfactory manner. Writing and format is of high standard	2 – All requirements, but two, have been met in a satisfactory manner. Writing and format is of acceptable standard.	1 – All requirements, but three, have been met in a satisfactory manner. Writing and format is of acceptable standard.	0 – The minimum number of requirements have not been met in a satisfactory manner.

Student: **Web Site Reviewed (URL):**

Rating	Content-related Features	Comments
	1. Home page shows the main components of the Web site effectively.	
	2. Search function allows efficient access to information.	
	3. Company information is included; e.g., name of company, address, telephone number, fax number, e-mail contact, list of key personnel, video of key staff person.	
	4. Company policies on privacy, security and terms of business are clearly stated.	
	5. Products/services are effectively displayed—name, code, description, price, option to buy, link to shopping cart, detailed product information.	
	6. Shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes, total costs.	
	7. Shopping cart provides option to delete purchase(s), continue shopping or check out with link to shipping choices.	
	8. Shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) with link to payment choices.	
	9. Payment choices are clear—credit card, debit card, electronic cash.	
	10. Forms to gather customer information are well-designed.	
	11. Incentives to register are clear and attract attention.	
	12. Drop-down menus assist in filling out forms.	
	13. Additional content is offered to attract customers; e.g., detailed product/service information, frequently asked questions, "What's New," newsroom, forum, Web site tour, thank-you page, games.	
	14. Text is appropriate for potential customers.	
	15. Text is accurate—no errors in spelling, punctuation, grammar.	
	Design- and Technical-related Features	
	16. Overall impact of Web site is positive and motivating.	
	17. Web site aligns with potential customers' interests and needs.	
	18. Pages are consistent in format, text size, font, headings, colour.	
	19. Colour contrast helps items stand out or blend in.	
	20. Background is effective.	
	21. Special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video, marquee, 3-D graphics, 3-D animation.	
	22. Home page provides clear links to other pages of the Web site.	
	23. Navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, hover button, image map).	
	24. Navigation throughout the Web site is efficient (three or fewer "clicks").	
	25. After home page, navigation links are positioned in a standard location.	
	26. Organization of information is efficient (least used at "back" of Web site).	
	27. Processing speed is acceptable throughout the Web site.	
	28. Domain name (URL) is indicative of the products/services offered.	
	29. Viewers have the option to register and the ability to ask questions, request information and give feedback.	
	30. Viewers have the option to control viewing choices; e.g., text only, view videos, turn off sound, enlarge/reduce picture size, customize the home page, select language.	

Rating: 1 – low effectiveness   5 – high effectiveness   X – not available/in place

Assessment Task: E-commerce Web Site Evaluation	**MAM3120–3**

Student: **Web Site (URL):**

Planning the E-commerce Web Site

☐ A description of the proposed e-commerce Web site, including: • the company name, potential domain names (URLs) • potential customers, image to be portrayed • product/service line • method of Web site publication	☐ Approved storyboard for each page of the Web site, including design and text for each component of the Web site that indicates any photographs, sound, graphics, borders, pictures, audio, animation and video to be included

Developing the Web Site—Content-related Features

☐ Home page shows main components of the Web site and includes logo, description of Web site, links to other components in Web site, an e-mail connection, an ad from a partner and highlights for one product/service ☐ *Search function allows efficient access to information* ☐ Company information includes name of company, address, telephone and fax number, e-mail contact, list of key personnel, video of key staff person ☐ Company policies on privacy, security and terms of business (returns, credit) are clearly stated ☐ Products/services are effectively displayed—name, code, description, price, option to buy, link to shopping cart, detailed information on at least four products/services ☐ Shopping cart indicates purchase name, code, price(s), discount, shipping costs, taxes, total costs ☐ Shopping cart provides option to delete purchase(s), continue shopping or check out, link to shipping choices	☐ Shipping choices and costs are clear (courier, postal service, bus, rail, air, truck) with link to payment choice ☐ Payment choices are clear—credit cards, electronic cash (e.g., e-cheque, smart card, electronic wallet) ☐ Registration form to gather customer information is well-designed ☐ Incentives to register are clear and attract attention ☐ *Drop-down menus assist in filling out the form* ☐ Additional content to attract customers; e.g., detailed product/service information, at least ten frequently asked questions, "What's New," a news release, *newsroom, forum, Web site tour, thank-you page, games* ☐ Text is appropriate for potential customers ☐ Text is accurate—no errors in spelling, punctuation, grammar

Developing the Web Site—Design- and Technical-related Features

☐ Overall impact of e-commerce Web site is positive and motivating ☐ Web site aligns with potential customers' interests and needs ☐ Pages are consistent in format, text size, font, headings, colour ☐ Colour contrast helps items stand out or blend in ☐ Background is effective ☐ Special effects have been added and are appropriate; e.g., pictures, photographs, graphics, sound, borders, audio, animation, video, *marquee,* 3-D graphics, 3-D animation ☐ Home page provides clear links to other pages of the Web site ☐ Navigation methods are effective; e.g., menus, bars, links (text, icon, banner ad, hover button, image map)	☐ Navigation throughout Web site is efficient (three or fewer "clicks") ☐ After home page, navigation links are positioned in a standard location ☐ Organization of information is effective (least used at "back" of Web site) ☐ Processing speed is acceptable throughout the Web site ☐ Domain name (URL) is indicative of the products/services offered ☐ Viewers have option to register and ability to ask questions, request information and give feedback ☐ Viewers have option to control viewing; e.g., text only, view videos, turn off sound, *e nlarge/reduce picture size, customize the home page, select language*

Testing and Presenting the Web Site

☐ Testing is completed using various browsers and operating systems to check speed of loading and operation and to debug the Web site using available editors	☐ Presentation of the e-commerce Web site to clients and other reviewers includes Web site purpose, potential customers, organizational structure and key features ☐ Reviewers' comments regarding strengths of, and areas for improvement to, the Web site are recorded

Modifying, Publishing and Documenting the Web Site

☐ Proposed changes to the e-commerce Web site are outlined ☐ Recommended changes and enhancements are incorporated ☐ The e-commerce Web site is published	☐ Documentation for the Web site includes guidelines for ongoing Web site management, such as: • items that need updating on a regular basis • items that need to be changed seasonally • suggested time for software/hardware review

Note: Items shown in *italics* are <u>not required</u> to be included in the e-commerce Web site design to meet the minimum requirements for this learning outcome.

2005 CTS AMENDMENTS
to the
Mechanics
Guide to Standards and Implementation

Summary of Curriculum Changes

Prerequisite changes:
- MEC1040: Engine Fundamentals is no longer a prerequisite to:
  - MEC2060: Ignition Systems
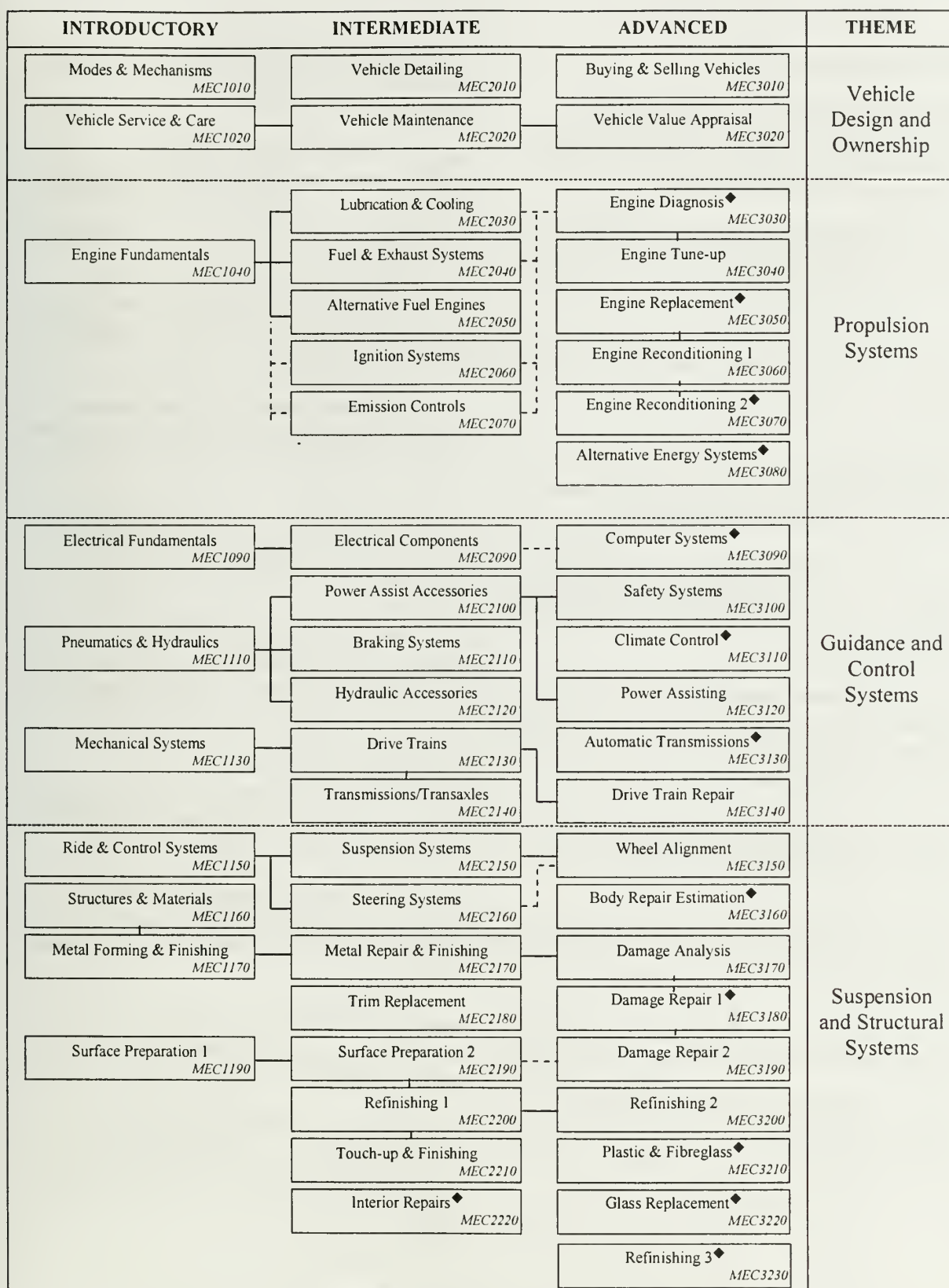 - MEC2070: Emission Controls

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Section B
- **Remove** page B.5 (1997) and **replace** with new page B.5 (Revised 2005).

Section E
- **Remove** pages E.21 and E.25 (1997) and **replace** with new pages E.21 and F.25 (Revised 2005).

INTRODUCTORY	INTERMEDIATE	ADVANCED	THEME
Modes & Mechanisms *MEC1010*	Vehicle Detailing *MEC2010*	Buying & Selling Vehicles *MEC3010*	Vehicle Design and Ownership
Vehicle Service & Care *MEC1020*	Vehicle Maintenance *MEC2020*	Vehicle Value Appraisal *MEC3020*	
Engine Fundamentals *MEC1040*	Lubrication & Cooling *MEC2030*	Engine Diagnosis◆ *MEC3030*	Propulsion Systems
	Fuel & Exhaust Systems *MEC2040*	Engine Tune-up *MEC3040*	
	Alternative Fuel Engines *MEC2050*	Engine Replacement◆ *MEC3050*	
	Ignition Systems *MEC2060*	Engine Reconditioning 1 *MEC3060*	
	Emission Controls *MEC2070*	Engine Reconditioning 2◆ *MEC3070*	
		Alternative Energy Systems◆ *MEC3080*	
Electrical Fundamentals *MEC1090*	Electrical Components *MEC2090*	Computer Systems◆ *MEC3090*	Guidance and Control Systems
Pneumatics & Hydraulics *MEC1110*	Power Assist Accessories *MEC2100*	Safety Systems *MEC3100*	
	Braking Systems *MEC2110*	Climate Control◆ *MEC3110*	
	Hydraulic Accessories *MEC2120*	Power Assisting *MEC3120*	
Mechanical Systems *MEC1130*	Drive Trains *MEC2130*	Automatic Transmissions◆ *MEC3130*	
	Transmissions/Transaxles *MEC2140*	Drive Train Repair *MEC3140*	
Ride & Control Systems *MEC1150*	Suspension Systems *MEC2150*	Wheel Alignment *MEC3150*	Suspension and Structural Systems
Structures & Materials *MEC1160*	Steering Systems *MEC2160*	Body Repair Estimation◆ *MEC3160*	
Metal Forming & Finishing *MEC1170*	Metal Repair & Finishing *MEC2170*	Damage Analysis *MEC3170*	
	Trim Replacement *MEC2180*	Damage Repair 1◆ *MEC3180*	
Surface Preparation 1 *MEC1190*	Surface Preparation 2 *MEC2190*	Damage Repair 2 *MEC3190*	
	Refinishing 1 *MEC2200*	Refinishing 2 *MEC3200*	
	Touch-up & Finishing *MEC2210*	Plastic & Fibreglass◆ *MEC3210*	
	Interior Repairs◆ *MEC2220*	Glass Replacement◆ *MEC3220*	
		Refinishing 3◆ *MEC3230*	

——— Prerequisite   - - - - Recommended sequence

◆Refer to specific courses for additional prerequisites.

COURSE DESCRIPTIONS

Course MEC1010: Modes & Mechanism
Students research, design, build and test a model of a transportation vehicle, using a simple power source, common materials and tools.

Course MEC1020: Vehicle Service & Care
Students develop knowledge, skills and attitudes to care for and service a motor vehicle.

Course MEC1040: Engine Fundamentals
Students investigate and describe operating principles, construction and applications of engines.

Course MEC1090: Electrical Fundamentals
Students identify and describe the operating principles and applications of electricity.

Course MEC1110: Pneumatics & Hydraulics
Students identify and describe the operating principles and applications of pneumatic and hydraulic systems.

Course MEC1130: Mechanical Systems
Students identify and describe the operating principles and applications of mechanisms used to transmit and control mechanical energy.

Course MEC1150: Ride & Control Systems
Students develop a basic knowledge of ride and control systems associated with vehicles.

Course MEC1160: Structures & Materials
Students identify the types of materials and components used in vehicle construction.

Course MEC1170: Metal Forming & Finishing
Students repair and re-form damaged metal panels.

Course MEC1190: Surface Preparation 1
Students assess the state of a painted surface, and use appropriate restoration procedures.

Course MEC2010: Vehicle Detailing
Students develop the skills required to restore and enhance the exterior finishes of a vehicle.

Course MEC2020: Vehicle Maintenance
Students perform the basic service requirements necessary to ensure adequate maintenance of a motor vehicle.

Course MEC2030: Lubrication & Cooling
Students diagnose, maintain and service the lubrication and cooling systems of a typical four-cycle gasoline engine.

Course MEC2040: Fuel & Exhaust Systems
Students diagnose, maintain and service the fuel and exhaust system of a typical four-cycle gasoline engine.

Course MEC2050: Alternative Fuel Engines
Students determine alternative fuels used to power motor vehicles.

Course MEC2060: Ignition Systems
Students identify the basic components and parts of ignition systems used on internal combustion engines, and service and repair an ignition system.

Course MEC2070: Emission Controls
Students describe the importance of controlling emissions and the technology applied to vehicles to meet prescribed standards.

Course MEC2090: Electrical Components
Students identify and describe the basic use and testing of the electrical components of a typical motor vehicle.

Course MEC2100: Power Assist Accessories
Students identify and explain the function of components and parts of power assist accessories.

Course MEC2110: Braking Systems
Students develop the necessary knowledge, skills and attitudes to diagnose, service and maintain a braking system according to accepted trade practices.

COURSE MEC2060:   IGNITION SYSTEMS

Level:	Intermediate
Theme:	Propulsion Systems
Prerequisite:	None
Description:	Students identify the basic components and parts of ignition systems used on internal combustion engines, and service and repair an ignition system.
Parameters:	Access to multimeter, timing light, hand tools and related resources.
Supporting Courses:	MEC1090 Electrical Fundamentals MEC1040 Engine Fundamentals

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• follow electrical safety guidelines by accurately interpreting and using instruction manuals	• observed performance related to:
	– selection and use of resources and materials
	– recognition of dangers of high voltages and currents.
	
	Assessment Tool
	    Task Assessment Checklist: Ignition Systems, Part 1, MEC2060–1
	
	Standard
	    Performance rating of at least 2 on each criteria
		10

• explain how a timed high voltage spark is achieved in magneto, point and electronic ignition systems	• ability to explain how the parts of magneto, point and electronic ignition systems function to produce timed ignition spark.
	
	Assessment Tool
	    Task Assessment Checklist: Ignition Systems, Part 2, MEC2060–1
	
	Standard
	    Performance rating of 2 on each criteria
		20

• recognize the drivability symptoms, and use visual and instrument checks to diagnose ignition system faults	• observed performance related to the ability to:
	– visually diagnose ignition faults
	– use instruments to diagnose faults
	– analyze drivability symptoms.
	
	Assessment Tool
	    Task Assessment Checklist: Ignition Systems, Part 3, MEC2060–1
	
	Standard
	    Performance rating of 2 on each criteria
		30

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• service and repair an ignition system	• observed performance in:
	  – servicing point ignition system
	  – servicing electronic ignition system
	  – correcting a defective system.
	
	Assessment Tool
	    Task Assessment Checklist: Ignition Systems, Part 3, MEC2060–1
	
	Standard
	    Performance rating of 3 on each criteria
		40

• demonstrate basic competencies.	• observations of individual effort and interpersonal exploration during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout

Concept	Specific Outcomes	Notes
Health/Safety Hazards	*The student should:* • demonstrate knowledge of and follow lab safety procedures • describe hazards involved when working with high voltages and currents.	Be aware of the potential for shocks and burns.

Identification/ Function	• list and describe the three common types of ignition systems
	
	• name the parts of a:
	  – magneto
	  – point type
	  – electronic ignition system
	  – computer-coil (distributorless ignition)
		Describe a distributorless ignition system.

COURSE MEC2070:   EMISSION CONTROLS

Level:	Intermediate
Theme:	Propulsion Systems
Prerequisite:	None
Description:	Students describe the importance of controlling emissions and the technology applied to vehicles to meet prescribed standards.
Parameters:	Access to specialized equipment and resources related to analyzing and testing emission control.
Supporting Courses:	MEC2030 Lubrication & Cooling MEC2040 Fuel & Exhaust Systems MEC2060 Ignition Systems

Curriculum and Assessment Standards

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• demonstrate safe work practices when working with emission control systems	• observed performance related to:
	  – safety procedures in use of tools and equipment related to vehicle emissions
	  – appropriate selection of and use of protective equipment
	  – recognition and control of hazards associated with engine emissions.
	
	Assessment Tool
	  Task Assessment Checklist: Emission Controls, Part 1, MEC2070–1
	
	Standard
	  Performance rating of 2 on each criteria
		10

• list and describe vehicle pollutants and their effects on the environment	• observed performance related to:
	  – listing vehicle emissions
	  – explaining exhaust emissions and their effects on the environment
	  – stating regulations pertaining to exhaust emission levels
	  – comparing emissions produced by gasoline as compared to alternate fuels.
	
	Assessment Tool
	  Task Assessment Checklist: Emission Controls, Part 2, MEC2070–1
	
	Standard
	  Performance rating of 2 on each criteria
		15

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
The student will:	*Assessment of student achievement should be based on:*	

• describe types and characteristics of pre- and post-combustion emission systems	• ability to identify and describe:
	  – types of pre- and post-combustion emission control systems
	  – parts of pre- and post-combustion emission systems
	  – the function and operation of pre- and post-combustion emission systems.
	
	Assessment Tool
	    Task Assessment Checklist: Emission Controls, Part 3, MEC2070–1
	
	Standard
	    Performance rating of 2 on each criteria
		15

• identify emission control components	• observed performance associated with:
	  – locating and identifying components on a vehicle
	  – describing how components work together to reduce emissions
	  – evaluating a given system for efficiency.
	
	Assessment Tool
	    Task Assessment Checklist: Emission Controls, Part 4, MEC2070–1
	
	Standard
	    Performance rating of 2 on each criteria
		25

• diagnose and service emission control systems	• observed performance related to:
	  – connection of a gas analyzer to a vehicle
	  – reading and recording the exhaust emissions
	  – analyses of emission system functions
	  – servicing emission control systems.
	
	Assessment Tool
	    Task Assessment Checklist: Emission Controls, Part 5, MEC2070–1
	
	Standard
	    Performance rating of 2 on each criteria
		35

• demonstrate basic competencies.	• observations of individual effort and interpersonal exploration during the learning process. *Assessment Tool* *Basic Competencies Reference Guide and any assessment tools noted above*	Integrated throughout